THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK,
DEVOTED TO
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

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For the Farmers' Cabinet.

Application of Lime to Soils,

Read before the Philadelphia Society for Promoting Agriculture, April 7, 1841.

Lime has long been regarded by farmers in certain sections of our country, and cultivating certain districts, as a most valuable agent. Stiff and tenacious soils are greatly benefited by its application, as is admitted by all who cultivate them. Whether the various chemical influences which have been assigned to its presence, are really those which constitute its virtue, I shall not inquire in this essay: I propose merely to submit some views that have occurred to me, which the plain practical farmer can fully appreciate, without the aid of chemistry or science, or their technicalities.

Clays and red shell soils are compact and tenacious, and are therefore greatly benefited by an admixture of lime, as they are rendered more mellow or friable by its application; the colour of the soil is also changed to a dark brown, and has a rich oily appearance. These combined influences give it a greater capacity for imbibing heat from the action of the sun, and this additional heat communicates an increased vegetative power; besides, the improved friability or mellowness of the soil gives greater facilities to the fibrous roots of plants to shoot further into it, and hence they obtain a larger supply of nourishment or food. Its capacity for absorbing moisture is also greatly increased, because, for the reasons above stated, the plastic properties of a stiff soil are removed, and moisture, either from rain or dew, is more freely admitted and absorbed; and having penetrated deeper into the soil, is retained, as if by a sponge, for a longer period. Farmers who are familiar with stiff soils, know full well that they will not admit heat nor absorb moisture so readily as those which are lighter, and that the latter do not bake and become so hard and dry as the former—besides, a purely clay-soil is always cold at a short distance below the surface.

Such soils, so improved, have increased capacity for imbibing heat from the action of the sun by day, and this heat is maintained for a longer period at night; and hence, a protracted evaporation or emission of heat is secured, which, acting upon the cool atmosphere of night, produces a greater amount of dew. The soil is therefore rendered capable of creating a larger supply of moisture—of imbibing more heat, and of receiving and retaining those agents of vegetation alternately, for a more protracted period. Dews are occasioned by a cool atmosphere coming in contact with the exhalations from the heated earth, or vice versa, and hence a condensation of the aqueous particles: the dew-drop of evening is first seen upon a blade of grass at its highest point.

Heat and moisture are necessary to vegetation, and the more you can obtain of these agents for your plants, the more vigorously will vegetation be sustained. Lime, when applied to a stiff soil, renders it more friable, porous or mellow, and it becomes more easy to cultivate: the plough does not meet with the same resistance; the roots of the grass and weeds are more easily separated from the soil, and may therefore be more readily destroyed, and a thorough tillage or pulverization of the land is thereby greatly facilitated. Besides, we find that vegetation is most vigorous where the soil is adapted to secure the largest amount of these supplies; and consequently that soil which by nature or cultivation is capable of imbibing and retaining the largest amount of these indispensable elements, has the greatest capacity for producing vegetation. A sandy soil appears too porous to retain heat at night, to promote to any important extent a condensation of the atmosphere, and thus to supply itself with sufficient moisture from dew—besides, it is too readily drained; while a clay or compact soil becomes indurated upon its surface, and heat from the sun cannot sufficiently penetrate it to be available for a like purpose: but when these are properly mixed and combined with other earths, such as lime, marl, or with manure, the soil opens its pores to receive the invigorating influence of the sun during the

day, and at night the heated exhalations escaping from it, producing a greater amount of dew, supply the plants, nestled in its bosom, with necessary moisture from the pure and bounteous fountains of the atmosphere.

Some farmers think that lime is injurious to wheat land — that it makes the soil cold, and that their lands, when dressed with it, are more apt to produce mildewed grain than they were before it was applied. That this, in many instances, has appeared to be so, I do not doubt, because the soil, by its application, is rendered more productive, and therefore we have more grass, which, under our present system of sowing grass-seed with wheat, is injurious to that crop, as I have contended in a former paper. Tull, in his excellent Treatise on Blight, says: "Wheat being doubtless originally a native of a hot country, it requires by its constitution a considerable degree of heat to bring it to perfection; and if much of that degree of heat is wanting, it will be the weaker, and when the solar rays cannot reach the lower parts of the stalks, the lowest leaves and knots cannot do their office;" and hence the maturity of the plant is protracted, because "the lower parts of the stalks must receive the greater share of heat, being nearer the point of incidence of the sunbeams reflected by the ground." Being deprived of this genial and necessary heat, since it is shaded near the roots by grass, and being imbedded in too moist and cold a soil, it has not the power of elaborating its sap or evaporating its fluids, and is therefore slow in ripening; and hence the crop, becoming diseased, is frequently destroyed by mildew.

In the application of lime to land, much care and close observation is required, to produce the best results. The farmer should not be *too generous:* he should not forget that lime and earth constitute *mortar*, and therefore his care should be only to apply so much to his soil, if light, as will render it sufficiently compact to retain moisture and heat; for a sandy soil is composed of spherical particles, and is too readily ventilated and drained of its moisture, and being mixed with lime, the interstices being closed, the soil is greatly improved. After several years of experience and careful observation, I am convinced that lime, when applied to a sandy soil, renders it more compact, and much more productive; and that manure, when applied to it after a dressing of lime, will have a much more lasting influence than it would have had before its application. Upon heavy soils, lime should be applied only in such proportions as will render it most mellow or friable; any thing beyond this, will be found to be injurious. It is not material, as I apprehend, whether it be put on in a hot or cold state, because it is soon cooled under atmospheric influence after being slaked, and cannot be ploughed in after being spread before it becomes chilled. I usually apply it in the spring, when preparing for corn, the working of which, and the preparation of the land for subsequent crops, thoroughly mix it with the soil. I obtain the lime when ready to apply it, have it placed in a situation convenient for water, where it is immediately slaked; and as it falls, it is carted out and spread upon the land previously ploughed, which, after being harrowed, is struck out and planted. I have applied it in other ways, but the results were never so satisfactory.

I have been told by some farmers, that the greatest benefits from the use of lime on their land are exhibited in about *seven years* after its application; some say in *four years;* some contend that they have seen its effects the second year, and others say that they never saw any effect whatever from its application, although they put it on in generous quantities. Now, I verily believe all these statements to be true, and I account for this singular anomaly in the following manner. In the latter instance, the lime was ploughed in so deep that it was never mixed with the soil, and therefore produced no effect; and in the former, the admixture took place probably in one, four, or seven years after it was applied. In some cases, it is said, land has been injured by it. I am inclined to believe that in those cases the farmer has been too generous, and would recommend as a corrective, that he plough deeper, and thereby mix more earth with his lime. He will thence have the advantage of a deeper soil. As the quantity best adapted to improve most soils, I would recommend from forty to fifty bushels unslaked to the acre. I have found excellent results on sandy, clayey, and loamy soils, from the application of that quantity. As I have never farmed limestone or red shell soils, I cannot advise respecting them.

I therefore repeat, mix your soil well with the lime which you may put upon it — pulverize it thoroughly — destroy all natural vegetation, if you wish to raise naturalized crops—exercise a sound judgment as to time and method, and you will seldom have reason to complain, in this part of Pennsylvania, at least, either of an ungrateful soil, or an unfavourable climate.

Kenderton Smith.

When I consider that what was thought by my father fifty years ago to be venerable and sacred, is now laughed at as ridiculous and absurd, have I not a right to expect and believe in the continuance of *progress?*

For the Farmers' Cabinet.

Magnesian Lime.

Mr. Editor,—Having always been ready to respond, in the main, to your agricultural views, I noticed in the last Cabinet, a selected article from the "General Report of Scotland," on the subject of magnesian lime; and believing that you, as conductor of the Cabinet, endorsed those opinions before they were suffered to appear in its columns, I cannot forbear joining issue.* When we observe correspondents firing at each other, on "mooted points," there is no great interest in agriculture jeopardized, because their several notions are "passed for their worth." Not so with the conductor; he is valued in the light of a teacher; his views with the reader always have greater weight, either for good or evil.

The article in question, I now wish to take up; and contend, that if such opinion should become disseminated and prevail among the inexperienced farmers, it would arrest the march of improvement: yes, throw cold water on that "spirit for liming," which has done more in Pennsylvania to renovate poor primitive soils, and even improve those in formation of a transition and secondary character, to the very acme of fertility, than all other means combined. The fact and truth of the matter is, the very richest and most valuable land in Pennsylvania, particularly in Lancaster and Chester counties, including the great valley of the latter, the very finest farms of these counties, overlay the magnesian limestone; and what is more conclusive, the most striking fertilizing and durable effects ever produced by the use of lime here in this county and in Chester, particularly the southwestern part, including Upper and Lower Oxford, East and West Nottingham townships, have been from magnesian lime. Cecil county, Maryland, *too*, will not be wanting in her testimony in favour of the magnesian lime, which has changed some of her sterile "barrens" into productive farms, at a cost of from twenty-five to thirty cents per bushel — ample testimony. For Lancaster county and the southwest of Chester county, also of Cecil county, Maryland, I speak advisedly and understandingly. If my information in regard to the great valley of Chester be not authentic, some intelligent writer hailing from the "Home of Agriculture," will put me right. But in this stage of the issue, let us come and reason together. After describing the real practical effects produced so extensively by *correctly analyzed magnesian lime*, under our own eyes, observation and experience, let us examine first into the origin of the *notion*, that magnesian lime is prejudicial to vegetation, and then follow with an array of such scientific testimony, which, in addition to the existing state of experience, as above, in real practice, ought, I think, to explode the absurdity.

1st. The origin of the prejudice, it appears, dates from an experiment made by Smithson Tennant, a physician of Yorkshire, in England, forty-one years ago, (nearly half a century,) who was a chemist. It would seem that Dr. Tennant is quoted, *and he only*, up to this day, to father the numerous offspring of this unfounded prejudice. He, to test the matter, sowed different seeds in a bed of calcined magnesia, mixed with some soil: he found they vegetated in an imperfect manner, and the plants were unhealthy; he then disingenuously inferred, that magnesian lime is injurious. Had the Doctor sowed his seed among soil too highly charged with ashes, pure lime, or liquid manure, we presume the result would have been the same. Although Sir Humphry Davy speaks respectfully of both the experimenter and the experiment, yet his own experience proved that *his barley* grew better on soil with some magnesia, than it did on the same soil without magnesia. "Amongst some specimens of limestone," he says, "which Lord Somerville put into my hands, two, marked as peculiarly good for agricultural purposes, proved to be magnesian limestones." Ure, in his valuable work on the arts, manufactures, and mines, uses this language: "Great quantities of magnesian lime are annually brought from Sunderland to Scotland by the Fifeshire farmers, and employed very beneficially by them as a fertilizing manure in preference to any other kind of lime. It has been unjustly and unfairly denounced by Mr. Tennant, and questioned by Sir H. Davy as a sterilizer.

Bakewell's Geology, of which in point of merit and value, it is sufficient only to say, that it has undergone an American edition by Professor Silliman, of New Haven. We quote page 390, as follows: "The magnesian lime acts more powerfully in destroying undecomposed vegetable matter, than common lime, and its effects on land are more dura-

* We have taken a different view of the proper province of an agricultural journal. The article at page 276, on the subject of Magnesian Lime, was introduced for the purpose of calling up such writers as Mr. Kinzer, whose excellent and well-written article will, it is hoped, bring forth communications from those of our friends who, without going back to the time of Dr. Tennant or Dr. Davy, conceive they have had experience of the fact, that magnesian lime has been injurious to their land, rather than otherwise. Truth will bear investigation; the question has not yet been decided. The pages of the Cabinet are offered for recording the views of those on both sides. Will they be pleased to make use of them?—Ed.

ble: hence it is, in reality, of greater value in agriculture, as a much smaller quantity will answer the same purpose." "Among the fertile soils of France, magnesia is found to be one of the principal fertilizing constituents."—*Bergman.*

"Magnesia, in consequence of its solubility in an excess of carbonic acid, exerts an action in the soil analogous to lime, and enters into the composition of plants."—*Prof. Giobert.*

"In sterile magnesian soils in the vicinity of mines or quarries, where it is found pure, the sterility is to be attributed to the cohesion of their parts, oxide of iron, lack of vegetable substance, alumina, and other ingredients.—*Mons. Abbene.*

"Though it is now satisfactorily ascertained, that the presence of magnesian earth in lime does not in any way interfere with its useful properties when employed as a fertilizing agent in the soil, yet its hurtfulness as a flux in the process of making iron, is well established."—*Fifth Annual Report, read in Senate Feb.* 1841, *by H. D. Rogers, State Geologist.*

"Most all the limestones of the United States abound in magnesia, yielding lime capable of hardening under water, or hydraulic cement."—*Prof. W. B. Rogers.*

The latter quotation proving the superiority of magnesian lime for building and plastering purposes, I set out to prove its superiority for agricultural purposes, and reprobate the prejudice which some few have urged against it. Have I succeeded? Let the advocates of Tennant's experiment answer, and give as good and high authority.

W. Penn Kinzer.

Springlawn Farm, Pequea,
Lancaster County, April 30, 1841.

Book-Farming.

Book-farming we know is not in favour with farmers, otherwise we should find admittance into every farmer's library, and *every* farmer has a library of some sort. But although we know, and therefore admit, that no man can be made a farmer by book, yet we cannot admit that the best farmer may not, at some time, find very valuable hints in a book. They cannot know every article of practice which is followed in every other part of the country; and as many practices are discovered by what is called chance or accident, it is clear that the discovery cannot be made generally known but by being disseminated by books. A farmer who travels, appreciates the information which he receives in conversation with others, and by observation of field labour; such a farmer possesses advantages over him who always remains at home, or within the circle of his markets; and the object of an agricultural book, and particularly of an agricultural periodical work, is, at stated times, to carry hints, suggestions and discoveries, important or unimportant, to the *home* of the farmer, that he who prefers to stay at home, may possess the advantages of him who travels at times abroad; and that he who travels abroad may compare what he has *seen* with what he *reads*, and decide which practice is best suited to his particular purpose; or, perhaps, when he is comparing the hints of others, he may himself discover a practice superior to them all. In this manner, a good periodical work is the means of disseminating through the country practices, which would otherwise be confined to the district which gave them birth. The collection and presentation of these desiderata are attended with much trouble and expense, and unless the labour is appreciated and encouraged—and hitherto it has not generally been appreciated and encouraged as it ought—it is impossible to employ the best means to collect the most valuable kind of information for presentation.—*Quar. Jour. Ag.*

On the Disease in Oats called "Sedging."

"There is a disease by which oats are sometimes extensively affected, called "Sedging:" the oats beard well, and continue for some time apparently to thrive, but soon get into a bushy state, and the leaves become broad, like flags or "sedge." Upon examining the roots, they are found diseased and full of tubercles, which, upon being opened, contain a reddish powder and animalculæ;—the plants, incapable of bringing their seed to perfection, continue some time in this state and then die away, reducing the crop, both in quantity and quality, to almost nothing. Potato oats are more liable than others to this disease, and early crops have been attacked, while those of very inferior quality, and cut green, have escaped. Were a discovery to be made of the cause and cure of the disease, it would confer an obligation on the farming interest to make it known."

Note. In our experience of this disease in oats, we have always observed its recurrence on the same portion of the field; and believing it from this circumstance to be a local affection, we have, by *local draining*, succeeded in effecting a perfect cure. The presence of the insects we conceive to be the effect, and not the cause of the disease.—*Ed. Ag. Jour.*

The same disease, namely, the gouty protuberances on the roots of the ruta baga, often arises, no doubt from the same source, an unhealthy subsoil.—Ed.

Best Mode of Applying Manure.

At a late meeting of farmers and gardeners at Framington, this interesting subject was fully discussed. Major Wheeler was of opinion that none of the virtues of manure were ever lost by deeply burying them in the soil, for if less advantage were derived the present year, more would be the result the next: he had buried manure two feet deep in his garden, and even then his crops found it, having always noticed that the deeper and more intimately mixed with the soil is the manure, the more able the plants to resist the effects of drought. He did not believe that any valuable portion of the manure washed down out of the reach of the roots of plants; he thought they would always extend as low as the manures applied were found.

Mr. N. Stone thought he had seen several instances where the manures had been placed too deep, and mentioned several cases where a heavy coat had been turned deep, and but little benefit had been found from it at harvest, either in that or the following year.

Dr. Dean observed, that as all manures must assume either a liquid or a gaseous form before they could become food for plants, he thought it probable that we lost a valuable portion of them, in consequence of their leaching down far below the reach of plants when we buried them deep in the soil: he did not see why the liquid matter should not descend with as much facility as water, and he feared that it often sunk so low as to be of no use to the cultivator. He fully agreed with those who conceive that we derive the greatest benefit from our manures when we take the trouble to form compost heaps, and mingle extraneous matter with the manure from the stables; that in such case we can lay them nearer the surface; that gases would always rise from them, and be lost, when there were not plants on the ground to absorb them. He therefore preferred to make use of compost manure, and to bury those but slightly in the soil.

Major Wheeler could not conceive how any valuable portion of manures could be lost by being buried deeply; he thought, if they were so buried as to prevent evaporation, they might be kept a long time; and if they did not operate so powerfully during the first season, we must, eventually, obtain the full benefit, for they could not be lost. He said an experiment had been made of leaching a quantity of manure through a body of sandy loam soil, placed in a barrel, the bed of manure being one or two inches thick above the loam, and the body of the loam being one or two feet in depth, and the water which drained through this mass issued out pure and sweet. In this case, all the salts valuable for vegetation must have separated from the water, and have lodged in the loam.

Dr. Dean replied, we must be cautious of being led astray by mere theory, and reminded his hearers of a dispute between Judge Buel and J. I. Fessenden; the latter contending that plants draw *all* their nourishment from the atmosphere, while the former thought they must receive *some* food from the soil. He argued, he had known large quantities of manure spread on a field and turned in deep with a plough, and neither the first nor the after crops were answerable to the quantity of manure so applied; but better harvests had been obtained on the same field with far less manure, when applied more near the surface. He had bought a field a few years ago, the soil of which was a sandy loam; by constant cropping it had become so exhausted, that the vegetable growth upon it was very light. Upon this land he had carted not less than one hundred loads per acre of peat muck, which he found near this field, but first put in heaps and mixed stable manure with it; and after fermentation had taken place, he applied this compost near the surface, covering it only as much as a harrow or cultivator would do it; and he now obtains excellent crops, and thinks he has, in some degree, altered the nature of the soil and bettered it permanently, more than it could have been done, had he applied nothing but stable or barn manure: his crops have ever been better, even on light soils, when he but slightly covers his manures.

Sugar-Beet for Stock.

Dr. W. S. Morton, in an address before the Cumberland Agricultural Society, recommends strongly the culture of the sugar-beet. He says:

"I can most confidently recommend the beet, for I have cultivated it for some 7 or 8 years, and have never experienced a failure; my best crops being produced in the *driest* years. I believe that six or eight times as much food for cows, sheep or hogs, may be produced from the same quantity of land in this crop, as in any other that I have ever tried: their product is prodigious on the richest land, and they are worth cultivating on that of medium quality. If the introduction of turnip husbandry into England is considered there the greatest era in their agricultural history, we may well be thankful that a root, much richer and more productive, is found so well adapted to our more arid country. There are, however, two things specially to be alluded to in its culture; the soil should have a cool substratum, and the land should receive a thorough fall ploughing *to destroy insects.* I lost three-fourths of my first sowing the last season from neglecting to plough in the fall."

To the Editor of the Farmers' Cabinet.

Slabbering in Horses.

Sir,—In the No. of the Cabinet for April, a correspondent attributes the slabbers in horses to the plant called the Spurge (Euphorbia maculata,) which is generally found in second crop clover; and *not* to the clover itself. Now, at that time, I was not prepared to believe that this account was correct, for I had never noticed that plant to infest particularly the *second* crop of clover, and not the *first*; besides, I had always been taught to believe it was the clover itself which was the deleterious substance; and never before having heard that the thing had been doubted, I confess that your correspondent's new notion had but little weight with me.

I find, however, that the idea is by no means *new*, for in the 2d volume of the Memoirs of the Philadelphia Society for promoting Agriculture, page 350, there is a valuable paper on this subject, written by Mr. A. Parlee, dated Wilmington, Del., 1810, in which it is made evident by experiment, that this plant is at least *one* of the causes of that singular disease, and goes far to exonerate clover, in any stage, from the charge of any poisonous quality whatever. Permit me to copy it for your pages.

"I communicate to you the result of some observations and experiments which I have made on the spotted Spurge (Euphorbia maculata,) relative to its being the cause of the salivation that occurs so frequently amongst horses while feeding the second crop of clover. The occurrence of a profuse discharge of saliva from horses, and its rapid production of great debility and emaciation, had not only excited the surprise of many of the farmers, but had also given rise to various conjectures as to the cause of it: opinions were founded on no substantial data, but often originated from the most vague surmises; by many, it was imputed solely to a peculiar quality inherent in the second crop of clover, as it generally first appeared when the animals were put to pasture on it; and the disease being almost exclusively confined to that description of pasturage, this was considered a corroborating evidence of the correctness of the hypothesis: but its not having occurred for many years after clover had been extensively cultivated, and never having occurred in many places where horses are pastured altogether on clover, sufficiently proved *that* opinion to be erroneous. It was then attributed to the effects of plaster—but from the occurrence of it on many farms where plaster had never been used, as well as its not having occurred where it had been used very copiously, this opinion was proved to be equally incorrect with the former.

"For the purpose of ascertaining the fact by experiment, I procured a small quantity of the Euphorbia maculata, and gave it to a horse, enveloped in a small quantity of clover, carefully gathered, stem by stem, and perfectly free from all other vegetables or extraneous matter whatever: a preternatural discharge of saliva took place in half an hour. This experiment was frequently repeated, and invariably with the same result. Again, to prove that clover did *not* contribute towards it, in some cases other grasses were used as an envelope, with the same effect; and when the horse was perfectly free from slabbering, a considerable quantity of clover, carefully gathered without the Euphorbia, was given to him, and no such effect was produced. These experiments I considered sufficient to prove that the Euphorbia maculata would produce salivation, and I am induced to think it is the general, if not the only cause of it. This plant, delighting in the well-cultivated clover ground, sends off many slender spreading branches about the height of the second crop, and is then very liable to be taken in with the clover by the larger-mouthed animals: but whether this species of Euphorbia has flourished for a long time in this part of the country, or has but lately migrated into it, I have not ascertained; but in either case, its having but recently intruded itself into the pasture fields can be easily accounted for: it comes forward, flowers, and ripens its seed about the same time with the second crop of clover; and as clover-seed is generally gathered from the second crop, it must be very liable to have some of the seed of Euphorbia gathered with it, and may in this way be extensively diffused over the country. The slabbering was observed in the neighbourhood of Westchester before it was seen in this neighbourhood; and as the farmers here have generally obtained their clover-seed from thence, it seems highly probable that it has been introduced in that manner.

"All the plants of the genus Euphorbia contain an extremely acrid juice; many of them stand at the head of the catalogue of vegetable poisons; some of them when rubbed on the skin will produce excoriation; and the least acrid of them, when taken into the mouth, act as powerful masticatories; but the macularia possesses its greatest acrimony when in flower, or a little before, and at that time the salivation has been observed to be most prevalent. Most plants, when thoroughly dried in the sun, lose much of their virtue; and this is also the case with the Euphorbia; and for this reason hay, when containing it, if thoroughly dried in the sun, will not be near so productive of salivation as when it has been dried in the shade; and this circum

stance should be attended to when gathering hay containing it. From the foregoing observations, therefore, I think it *extremely probable* that the plant in question is the general cause of salivation in horses. There are other plants which act as masticatories, but there are very few of them that are liable to be eaten by the graminivorous animals. I am however certain, that the Euphorbia maculata will produce it, and have always observed it to abound in the fields when slabbering was prevalent."

This plant begins to be in flower in July, or beginning of August, and continues to bloom for several weeks, during which time it no doubt possesses the greatest acrimony; and it is at this time that horses are most commonly affected with the disease called slabbering.

JOHN DALY.

For the Farmers' Cabinet.

Potatoes.

"Let nature have her perfect work."

MR. EDITOR,—Had your correspondent C. (p. 296, No. 9, for April) lived a century ago, his proposal to deprive the potato plant of its seed-vessels to strengthen the root, would have been in season, for the wise folks of that age supposed that "art could *improve* nature;" but such a scheme as that which he advocates is now quite out of date, for it is found that nature is in every thing perfect, and all that man can do is to assist her by bringing within her reach the materials for her work, or removing out of the way those obstacles that would impede her progress. The instance which he cites, of an experiment made by M. Zeller, Director of the Agricultural Society of Darmstadt, is only the repetition of the old story, which has come regularly up and gone regularly down for the last age: the plan has been advocated and abandoned times and often, and wise men have at length come to the conclusion, that Nature knows best how to do her own work. An account of M. Zeller's experiment of removing the potato blossom, is going the round of the agricultural papers, and the difference in favour of the operation is generally made to appear, as stated in the Cabinet, namely, as 476 to 37; but the latter number is evidently a misprint — it should be as 476 to 437, and so it is stated in the New England Farmer, one of the best agricultural journals in the United States. A.

P.S. Is it not time, now-about, to revive again the hilling of corn?

WE can never hope to render soils more fruitful by applying a gill of manure to the hill, and then carrying off the whole product.

Tillage in the Hebrides in 1811.

THE tillage of a great portion of the Hebrides (Scotch Islands) is thus described in the agricultural survey of those islands. "A man walking backward, with his face towards four horses abreast, brandishing his cudgel in their noses and eyes to make them advance, followed by a ristle-plough employing a horse and *two* men—the three, commonly all together superfluous—still followed by four other horses, dragging clumsy harrows fixed by hair ropes *to their tails*, and almost bursting their spinal marrow at every tug and writhing of their tortured carcasses! All this cavalcade on ground uninclosed, undrained, and yielding on an average three returns only for the seed sown, and sometimes lost altogether by the depredations of cattle, or accidents in a late harvest! Much of the most laborious and degrading work—such as carrying burdens of manure and peats upon their back—performed by *women*."—*Macdonald's Survey.*

To the Editor of the Farmers' Cabinet.

Mildew.

SIR,—On a visit yesterday to a friend in Jersey, I was shown on his finely-cultivated farm, three fields of wheat of the greatest luxuriance, and promising a rich reward at harvest. The best of these was sown in August, the next best in September, and the remaining piece in October: the whole at present is free from the fly, but I fear my friend must make up his mind to a decided case of mildew in all, as they are all seeded with timothy, and are remarkably thickly set. If Colonel Smith's theory of mildew be correct —of which I have no *doubt*, and of which my friend entertains the greatest *fear*—his *hopes* will "go by the board" as certain as that he will have deserved a better fate. The above crops are the most luxuriant that I have seen, and if they were as clear of grass as they are of weeds, I should lay the yield at about 35 bushels per acre; as it is, however, one half that quantity and a third of the quality might be nearer the mark.

I consider the agricultural public much indebted to Col. Smith for his essay, and hope that many will be induced by it to make a fair trial of the plan which he proposes to adopt, and which has, I understand, obtained the sanction of experience in his hands and the confidence of very many others. In my yesterday's tour, I saw rye 3 feet in height, with the ears fairly developed—a remarkable growth for this remarkably backward and untoward spring.

JACOB TRYON.

Philad., May 5, 1841.

For the Farmers' Cabinet.

Blight — Mildew.

I have been a good deal interested in looking over Col. Smith's article in the last number of the Cabinet, and would before this have said so, if an unusual press of business had not deprived me of the necessary leisure.

The wheat crops of the middle states have of latter years become so precarious, that every rational suggestion as to the "cause and remedy," deserves the attention of the farmer. Our wheat and rye, and Indian corn, constitute, emphatically, the staff of life; and when there is so widely extended a failure as there was of rye in 1836, and so serious an one as there has several times been more recently of wheat, every person who finds his garners empty when he had hoped to have them well filled, feels that the subject comes home to his own individual interest and comfort, in a manner that is of no trifling consequence.

Col. Smith thinks that the growth of grass in our wheat fields, is the great cause of the mildew, which so frequently and so suddenly prostrates the hopes of the farmer. He talks of the "elements of vegetable vigour and vitality"—the "elaboration" of sap to the grain —and the difference of temperature between the soil covered with a coat of grass, and that which is exposed to the sun, &c. Now, all this I don't profess to understand much about, being a plain matter-of-fact man, and literally eating my bread in the sweat of my face: but I acknowledge I have so many and strong old-fashioned partialities in favour of sowing grass seeds over our fields of winter grain, that I am reluctant to yield it to any theory, unless it shall be sustained by generally acknowledged facts. Now, I put it to every man who has raised wheat or rye for the last dozen years—what has been his experience?

Last season, and in the harvest of 1839, we all know there were extensive failures of the wheat crop, owing to the depredations of the fly, and prevalence of mildews. In 1839 my wheat—between the first and last sowing of which in the autumn of 1838, there was a difference of ten or twelve days—was all exceedingly injured by the mildews. The earliest sown, however, was decidedly the best: it was all sown with clover and timothy in the spring. The lowest and best ground had been the earliest sown with wheat; it was the best adapted to the growth of grass; and there was, accordingly, a much more luxuriant coat in that part at harvest, than there was in the higher and lighter part of the field. The coat of grass, then, could not have caused the mildews in the higher and lighter part of the field; nor did it, apparently, increase it in the lower part. The same observations would apply to my wheat last season; I had two lots, the soil of which was heavy and rather low, but well adapted to grass: at harvest, the grass in these lots was luxuriant, while in the higher ground—and every body knows that our dry lands in Jersey are not very favourable to the growth of grass—had very little grass scattered over it: the wheat here was almost worthless, while that which was standing with a fine coat of grass was good. I believe the secret in both years was in the early sowing of the wheat, the first being put in about the 5th, and the residue finished both seasons about the 20th of 10th month.

Have I already taken up too much room, or shall I remark in passing, that both last year and the year before I had two or three acres of Italian spring wheat; both lots were sown on the 1st day of the 4th month, and clover and timothy sown at the same time: they were both in good order, and at harvest the coating of grass was every thing I wished it to be. The crop in 1839 yielded a little more than twenty bushels per acre of fine plump grain, and the straw was yellow, bright and clean, as could well be imagined; last year the yield was but eight bushels per acre of miserable grain; the straw was covered with mildew, and a great deal of it destroyed by that *other pest*, the Hessian fly. I whisper in the Editor's ear, that I could not have borne that my neighbours should have seen me "sweeping the field with ropes while the dew was on," for some of them might have hurt themselves laughing, while others, taking it up more seriously, would have been for sending me over the Schuylkill to your palace for the insane!

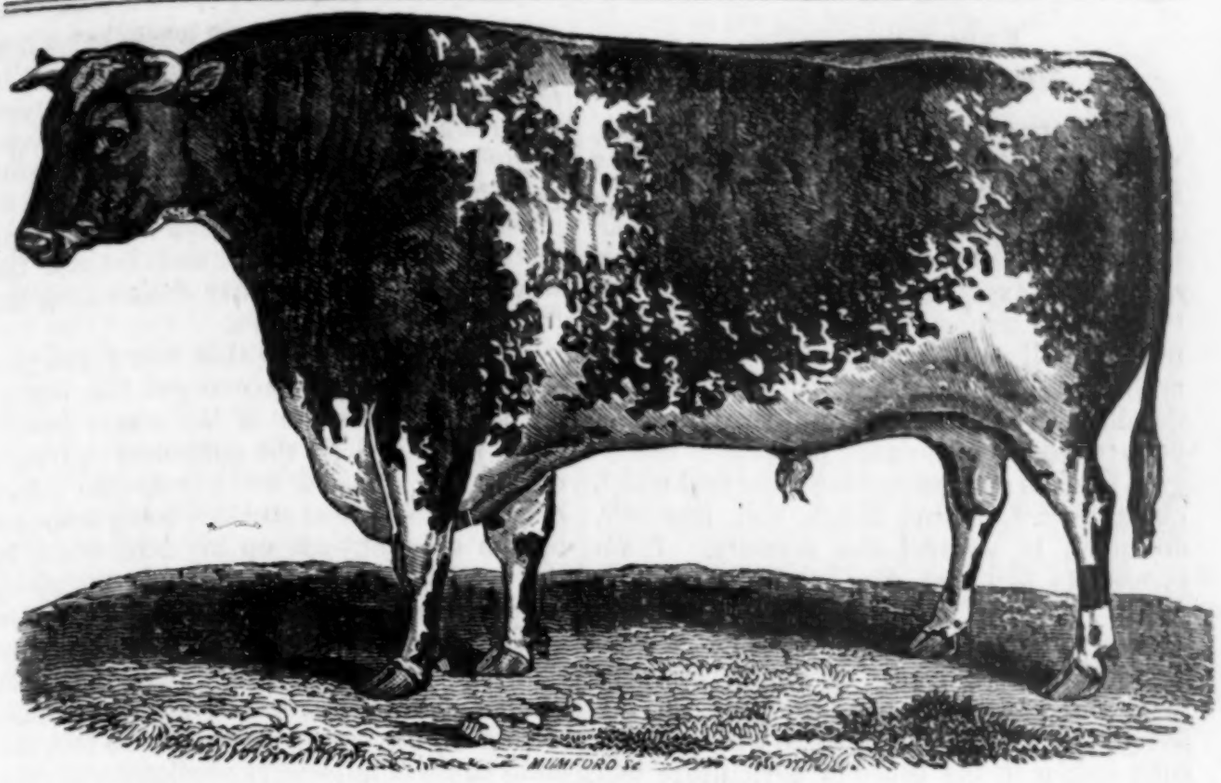
Should I live to sow wheat again, I will put it in early; and if my good friend, the Colonel, will excuse my obstinacy, I don't mean yet to forego the scattering abroad my grass seed, with a liberal hand, over my grain fields.

Z. Y.

Gloucester Co., N. J., 5th mo. 7th, 1841.

The beautiful shade trees before your dwellings which shield you from the heat of summer, and shed an air of fragrance and beauty around the spot on which they stand, and your fruit trees from which you have so often regaled yourselves, WERE PLANTED BY OTHER HANDS.

It must be the destiny of the very best and richest countries to degenerate, whenever successive croppings of even the richest soils shall be pursued, unless the requisite means are adopted for renovation.



PATRIOT.

PATRIOT, *Roan, calved in* 1804. *Bred by G. Coates. By Duffield. Dam by Haughton. G. d. Milbank, by Christopher Holmes's Bull.*

THIS engraving is from a superb coloured mezzotinto print, by William Ward, from a painting from the life, by Thomas Weaver; dedicated to Lord Yarborough, President of the Agricultural Society for the division of Lindsey, county of Lincoln, 1810.

PATRIOT was the sire of many very valuable individuals of the short-horn breed of cattle in England, and was himself sold for five hundred guineas. From a cross with such an animal, stock has been raised which at two years old have been sold to the butchers at astonishingly high prices; their *early maturity* and capacity to continue growing, rendering them the most valuable stock for the farmer and grazier.—This characteristic has excited the wonder and obtained the approbation of every one not blinded by interest or prejudice. Mr. Nesham, of Houghton-le-spring, fatted a short-horn steer, which, at 25 months old, was completely covered with fat over the whole carcass—supposed to be the fattest steer of his age ever seen, and estimated to weigh 1050 lbs. Mr. Arrowsmith, of Ferryhill, feeds off his short-horns at two years old, and has obtained from the butchers as high a price as $95 a head—the time of selling from the beginning to the latter end of May: in the first winter he feeds with straw and turnips, in a fold yard; in May they go to grass, and return to hay and turnips in the fold yard in November, for the winter: sold in the following May from grass. Mr. Bailey observes, the common practice amongst breeders of the improved short-horns is, to put the year-old heifers to the bull the beginning of July, so as to calve not later than the middle of May; the calves run with and suck their dams until August; the cows are then put upon after-grass, and are fed through the winter with turnips, and are sold to the butcher in May or June following on an average of $125 a head—which, with the value of the calf, cannot be estimated at less than $150 for a three year old heifer. Mr. Walton, in Teesdale, sells his steers at two years and a quarter old for $100 to $125 a head, fed solely on vegetable food: he has often, for the sake of experiment, bought in calves of the common breed, and uniformly found that his own, at two years old, were fatter and more fit for the butcher, than the others at three, although kept and fed exactly alike. Mr. Coates slaughtered a heifer which, fed on turnips and hay only, weighed, at two years and two months old, nine hundred and fifty-two pounds. Mr. John Rennie, of Phantasie, produced at the East Lothian Agricultural Society's meeting, in November, 1823, a steer from 18 to 20 months old, the four quarters of which weighed 118 stones, 1 lb., (8 lbs. to the stone), or 945 lbs. He also exhibited before the Highland Society of Scotland, a steer, aged 2 years and 4 months, the four quarters of which weighed 1231 lbs. (153 stones, 7 lbs.—8 lbs. to the stone).—*Youatt's Treat. on Cattle.*

For the Farmers' Cabinet.

Mildew, Blight or Rust.

Mr. Editor,—The essay by Col. K. Smith, read by him before the Philadelphia Society for promoting Agriculture, on the above subject, deserves notice. In my remarks I shall be brief, and I hope to the purpose. Should subsequent experience prove the truth of the "cause and remedy" devised by that gentleman, he will merit a statue of gold, and farmers will not fail to raise it; but the period for the discovery of that important secret has not yet arrived: the combined research of intelligent farmers manifesting the same zeal which characterizes Colonel Smith, will, however, do much to unravel the mystery. I am pleased to find that the Colonel, as well as others of your correspondents, deny the agency of fungi or parasitic plants as connected with the *cause* of blight, however much these may attend as an *effect*. Is my friend, Col. Smith, (for a man who exhibits such ardour in the cause of agriculture can be no other than my friend) a real farmer?* But I digress.

The respectable writer asserts, that grass-seed sown amongst wheat is the *cause* of mildew, and to abstain from this practice constitutes the *remedy*. In this view of the matter, I can only say, we farmers of Lancaster county who make wheat-growing our principal business, ought to be permitted to record our experience and close observation against this "cause and remedy;" our practice and observation condemn both, and we can furnish instances times and again in proof of the assertion. Many farmers in this county still take two crops of wheat successively off the same field; the first being sown on clover lay, when, if the field lie low and flat, and is destitute of manure and carbonate of lime, the crop will be liable to blight, although, let it be remembered, grass-seed is never sown with this first crop; then, when the second crop of wheat follows, and frequently half the field gets a dressing of stable manure, and the whole field, after being sown with wheat, is also sown with grass-seed, even should mildew be prevalent the following harvest, a good crop of wheat and grass, too, may be traced to the line of the manure—the balance, a handsome sample of mildew. According to *my* theory, mildew is rarely, if ever, found on good wheat land of high and undulating aspect, when cultivated clean from *binding grass*, such as the native varieties, particularly the poa compressa of Muhlenburg, or blue grass, but we have in no instance sustained any damage to our wheat crops from artificial grasses, when sown, provided the soil be clean of binding grass, or even timothy, before the wheat was sown, and especially when the soil is well supplied with manure: but we are never troubled with grass "a foot or a foot and a half high, and matted on the ground," and I think this would hardly happen after clean cultivation, from the grass-seed sown.

My own practice within two years, goes to explode the new discovery of Col. Smith; for having, on account of the severe drought three years ago, for the purpose of sparing a clover sod intended for wheat, (the *young* clover on the wheat stubbles being destroyed by the drought,) cut up my corn, which, by the bye, was well manured for in the spring previous, and sowed the field—situated low—with wheat, which, owing to the dry weather and good cultivation, was unusually clean and free from grass; but wet weather setting in, the wheat was sown too late, (another cause of mildew,) I predicted a blighted crop; and so it proved, although perfectly free from grass, yet there was a large yield of straw. Well, the following season I manured one half of this field, and farmed the whole in other respects alike; but at harvest, although I had previously, in fall and spring, sown three varieties of grass-seed, the whole taking remarkably well, yet not sufficiently strong to mat upon the ground or grow to any great height until after harvest; the result proved itself the overthrow of the "cause and remedy"—a full crop of wheat, fine berry and bright straw, when, the harvest previous, the straw was unfit for any thing but litter, the grain light and shrivelled, but the ground the freest from grass I ever saw.

Now, let us examine whether the proposed *remedy* be not worse than the disease. "The system of wheat-farming is wrong," observes the writer, and proposes "to discontinue the practice of sowing grass-seeds upon land sown with winter grain, ploughing the wheat stubble after harvest, and permitting the scattered grain, &c. to grow two or three inches high; then to plough again and sow grass-seed alone, about the 10th of October, which will insure a more abundant crop of hay the ensuing season." Now I am led to ask, what practical farmer would not prefer occasional blight, rather than the expense and labour of preparing his land for grass as for wheat! to say nothing of the loss he would suffer in not having his wheat stubble matted a foot in height after harvest for his stock. But this is not all: imagine for a moment how this system would work on a farm of good size, where about 50 acres are annually sown with wheat, and as many acres in grass,—first, plough fifty acres, perhaps twice, for wheat,

* Col. Smith cultivates one of the best farms, of upwards of 200 acres, in the county of Philadelphia, in the *best possible manner*.—Ed.

and then set about ploughing fifty acres *twice*, for the reception of grass-seed!—what *practical* man will not prefer occasional blight to the "remedy" on such terms?

I join issue with the respectable author of that well-written paper in another particular: I allude to his views of vegetable physiology. He says, when arguing that the rays of the sun are impeded from the roots of the wheat by a heavy coat of grass—"the last effort of a stalk of grain is to elaborate its sap to the berry—the leaves of the plant, having performed their office of shading the soil, die away." The leaves, which are the real lungs or elaborating organs of a plant, are here treated as shadows! If, however, Col. Smith will withdraw his claim for a premium, I shall pursue the subject-matter of his paper no farther for the present, but will just add, by giving no anonyme, and dating my *whereabouts*, I am always accessible to corresponding agricultural friends—an advantage not afforded by anonymous contributors, many of whom would render service by acknowledging themselves.

W. Penn Kinzer.

Springlawn Farm, Pequea,
Lancaster County, May 3, 1841.

For the Farmers' Cabinet.

The Borer.

In many sections of the country, this worm is so destructive to apple, peach, and quince trees, as to discourage the farmer from planting them; and many young orchards are nearly destroyed. Numerous *cures* and *preventives* have been, from time to time, published, and all have eventually failed; some, probably, in consequence of requiring more time, labour and money, than farmers generally are able to spare. A few years ago, fresh tar was highly recommended as a certain preventive; I have seen the experiment fully tried on a number of fine apple-trees near a tan-yard, and they were nearly all destroyed by the worms. Unleached ashes, lime, rye straw, and many other articles, have been found quite ineffectual. The old custom of raising a small mound around the tree in the spring, is the worst that can be adopted. The latest preventive that I have seen published, is tansy or wormwood planted around the trunk of the tree; I have not tried it, but I suspect it will not prove more effectual than hot lime, fresh tar, and other bitter doses.

Having been long familiar with the habits and operations of this destructive worm, and believing I have adopted the simplest, cheapest, and most effectual mode of preventing its ravages, I venture to offer it to the readers of the Cabinet, hoping some of them will be willing to try the experiment. Unfortunately for the orchardist, the theory that perfectly healthy plants will not be attacked by insects, will not apply in the case of the borer. On the contrary, it seems to be fond of the most vigorous and healthy trees; and often, after the farmer has carefully cultivated his young orchard for several years, and observed with pleasure its rapid growth, he is surprised and disappointed to find tree after tree falling prostrate, and he soon discovers that the trunk has been completely *girdled* just below the surface of the ground. The worm is partial to that part of the tree; only boring upwards above it at a certain period of its existence, when its change into a fly is about to take place; after which it eats a hole through the bark and escapes. This occurs during the 5th and 6th months (May and June,) and the fly, which is remarkably active, lives through the summer, depositing its eggs in the bark of the tree at the surface of the ground. Therefore, the deeper the earth is above the roots, the higher up in the trunk the egg will be placed, and the greater will be the injury by the boring of the worm. On the other hand, if the trunk of the tree and the upper roots be kept perfectly bare, winter and summer, the fly will deposit its egg (if it performs the operation at all) in the roots, several inches from the body of the tree, and little or no injury will follow. My own experience enables me to assert, that a worm will very rarely be found in a tree with its roots thus exposed; and the tree will flourish better than when planted deep. In transplanting trees from a nursery, great care should be taken not to plant them too deep; let the upper roots be so near the surface of the ground, that a little basin formed about the tree may expose the upper part of them to the sun and air.

S. Rhoads, Jr.

Haddington Nursery, 5th mo. 1st, 1841.

Grease for Carriage Wheels, &c.

This composition prevents friction to a great extent, and of course prevents the wear of all rubbing surfaces. Its cost is not comparatively greater than the materials often employed for the purpose; it is not changed by heat, and hence does not liquefy and flow away from its proper place.

Black lead pulverized	50	parts by weight.
Hog's lard	50	do. do.
White soap	50	do. do.
Quicksilver.	5	do. do.

Amalgamate well the lard and mercury by rubbing them together for a long time in a mortar; then gradually add the black lead, and lastly the soap, mixing the whole as perfectly as possible.—*Rec. Soc. Poly.*

For the Farmers' Cabinet.

Lime, a Septic.

Mr. Editor,—I must claim the privilege of a brief reply to the communication of Agricola, in the Cabinet for April, in which he has been at some pains to prove that which, if he had taken the trouble to read my paper throughout, he would have seen I had fully admitted; as my object was, to show by quotation and experience, that lime, under *certain circumstances*, had an effect differing from its ordinary operation; and if proofs of its anti-septic powers were wanting, I could have referred him to some which (unlike his egg and white-wash experiments) would have had, at least, some little bearing upon the question: by neutralizing the acids, it arrests the fermentation in cider and preserves it sweet, and its mixture with bad wines was an imposture as old as the days of Henry IV.

Falstaff.—"You rogue, here 's lime in this sack, too."

Now, what are the facts which he so triumphantly parades, as decisive of the question? The preservation of boards for 34 years by lime-wash. It may be a secret worth knowing to Agricola, but long known to practical men, that white-pine, walnut, or chesnut boards, exposed to the sun and air, will imperceptibly wear away by the abrasion of the weather, *but will not rot at all.* Under any circumstances, a thin pellicle of carbonate of lime, (which white-wash immediately becomes,) could have no other effect than the exclusion of air and water. For this purpose, oil and brick-dust are as good; and varnish would be much better, with the advantage, that it will not be washed off by the rains, as in the case of the Montgomery farmer's chips.

Fact 2d, proves, that lime-wash will preserve eggs from corruption—admitted. His old woman, who flourishes the white-wash brush, could have told him that lard, or any other unctuous substance which would exclude air, will answer the purpose equally well.

I omitted to mention in my former communication, that the suggestion which led to my experiment was taken from Chaptal's Agricultural Chemistry, Boston edition, page 60, where he says: "We are indebted to Davy for some experiments which throw a great light upon the action of lime upon vegetables. He has *proved*, that the fibrous portions of plants, deprived of all the particles which can be dissolved by water, presents another series, soluble, after having been for sometime macerated with lime: thus lime (he says) may be very efficaciously employed, when it is wished to convert dry wood or fibrous roots and stocks, to the nourishment of plants."

After stating that lime, in the state of a *carbonate*, will not produce this effect, he goes on to say, that "it is necessary to employ lime slacked with water and mixed with a fresh portion of that fluid, and the fibrous substances must remain for sometime exposed to the action of this solution."

Then follows the quotation which I had supposed to be an extract from Davy, but which turns out to be (from the absence of inverted commas) a part of the text. Thus it appears that we have the testimony of the two greatest agricultural chemists of the age, that "lime," in the words of Chaptal, "renders soluble and suitable to the nourishment of plants, some substances which, in their natural state, do not possess this characteristic," &c.

In my experiment, it was proved that all that is required to attain the desirable result is, to incorporate the vegetable matter saturated with water, with a sufficient quantity of *quicklime*, and leave the rest to the rains, to produce the necessary maceration and solution.

In the experiments which Agricola prescribes for me, I am to deal very tenderly with the chips, through fear of destructive decomposition, a combustion as he calls it. After all, this is very probably the great desideratum: as to combustion, properly so called, or the ashes of which he speaks, I saw nothing of the kind; and I defy him to produce either the one or the other, by the agency of slacked lime.

Now, Mr. Editor, after having sifted the useless out of his production, what have we left to disprove the solvent powers of lime? Nothing. On the contrary, he has given me fresh encouragement to pursue the experiments; and if, in a result, I find I have mistaken the cause, I will most cheerfully make all due acknowledgments. As to the charge of *making facts*, I shall only say that it is as unworthy of Agricola, as it is unjust to

Arator.

Kishacoquilas Valley, May 5.

P. S. I must apologize for having inadvertently appropriated a signature which of right belongs to another of your correspondents.

The sooner a farmer gets a profitable return for one dressing of dung, the sooner he can afford another; and if a proper course of crops be taken, he may go on a very long time without feeling cause to complain that his lands are too rich.

For the Farmers' Cabinet.

Cultivation.

I HAVE often thought that Dr. Johnson's definition of the business of a schoolmaster, was particularly applicable to that of the agricultural journalist: "To recall vagrant inattention," and to "stimulate sluggish indifference."

Every movement of the farmer—every step which he takes, is emphatically under the broad canopy of Heaven: it is in the midst of the forests, and the fields, and over the luxuriant carpet which nature has so liberally spread abroad for his enjoyment. He ploughs, he plants, he cultivates, under a full persuasion of the fidelity of Nature's great "Fructifier." He throws "broad-cast" his seed into her bosom, nothing doubting the continued fulfilment of the ancient promise, that seed-time and harvest shall not cease while the earth remaineth.

It is an appropriate duty of the periodicals which the farmer reads, and puts into the hands of his children, not only to keep him informed of the improvements that are continually bettering the condition of his "craft," and to suggest to him variations in his crops, as well as new modes of feeding them out, and every thing else, in fact, connected with his "thrift"—the appliance of his farm and household,—but also, to raise his views from his horses and his plough, to the magnificence of nature that is around him, and from nature, as the poet says, up to Nature's God; and to remind him occasionally of the fact, which his customary round of duties may lead him to forget, that his vocation, if properly followed, is among the noblest, and most ennobling, pursued by man. There is a progressiveness—an onward course, in the efforts of the farmer, that render them delightful; and why should not this be continually accompanied by a corresponding improvement of the mind, and enlargement of views, that would place *his* among the most intelligent and respectable of the professions. The farmer, it seems to me, cannot behold but with great complacency, his horses—his cattle—his sheep—his *every thing* that is living around him, obviously improving by his attention, from year to year;—he perceives the truth of the old saying, that "land is honest," for he finds his fields always grateful for what he bestows upon them; and there is an indescribable feeling of consciousness, that he deserves more of his country than he who has led armies to battle, and slain his thousands—because, in the language of old David Lawton, he has made two blades of grass to grow, where but one grew before.

There is great inducement for our farming population to believe that the tendency of every thing connected with their vocation is, like every thing else in this great and wonderful Republic, *upward and onward*. Let us, then, extend our views—let us "look aloft"—let us aim, as Sir Philip Sidney advises, at the "mid-day sun," and who can doubt but our judicious enterprise will render the result correspondent with the aim?—as advantageous to the permanent interests of the country, as it will be gratifying and beneficial to ourselves.

Z. Y.

For the Farmers' Cabinet.

Stall-Fed Sheep.

MR. EDITOR,—I am much gratified to find the correspondents of the Cabinet advocating more care in the husbandry of sheep. It is truly astonishing that so little regard is paid to this kind of stock; nothing is more easy than to make them the most valuable, and assuredly it is the most *convenient* mode, by which a man may convert a very considerable part of his produce into a marketable article at home, and secure to himself, without the cost of cartage, a large and valuable addition to his stock of manure on the premises. It seems that great attention is being paid to feeding sheep in enclosed yards and sheds in England, by which much profit is obtained at a very small outlay of capital. In a late periodical I find an account of a very interesting experiment, in feeding sheep in a yard with a shed, which I copy for insertion in your much improved journal.

JNO. ELDRIDGE.

"On the 1st of January, 1839, I drew 40 wether hoggs (sheep over one year old) out of my Leicesters, and divided them into two lots as equal in quality as I could get them: I found, on weighing them, one score to weigh 183 stones 3 lbs., the other 184 stones 4 lbs. I then put the first lot into the yard, and placed the other on turnips in the field, the land being sandy, well sheltered, and peculiarly favourable and healthy for sheep; each lot had exactly the same quantity of food given to them, which was as follows:—1st. As many cut turnips as they could eat, which was about 27 stone per day for each lot. 2d. Ten pounds of linseed cake, at the rate of half a pound per sheep per day. 3d. Half a pint of barley per sheep per day. 4th. A little hay, and a constant supply of salt. For the first three weeks, both lots consumed equal portions of food, but in the fourth week there was a falling off in the consumption of the sheep in the sheds of three stones of turnips per day; and in the ninth week, there was a falling off of two stones more; of linseed cake, there was also a fall-

ing off of 3 pounds per day; the sheep in the fields consuming the same quantity of food from first to last: the result of the experiment being as follows:—

	20 in shed.	Increase.	20 in field.	Increase.	14 lbs. to the stone.
	st. lb.	st. lb.	st. lb.	st. lb.	
Jan. 1st	183 3		184 4		
Feb. 1st	205 0	21 11	199 8	15 4	
March 1st ...	215 10	10 10	208 2	8 8	
April 1st	239 9	23 13	220 12	12 10	
Total increase		56 6		36 8	

"Consequently, the sheep in the shed, although they consumed one-fifth less food, made above one-third greater progress. The circumstances of the experiment were, if any thing, unfavourable to the sheep in the shed; the turnips, by being stored in the house for their use, were drier and not so palatable as those in the field; and the shed sheep were salved or rubbed with mercurial ointment in February, which is generally supposed to give a check to feeding sheep.

"From this important trial of the comparative merits of feeding in the open field and in a yard with a shed, the valuable fact is established, that shed-feeding sheep economizes greatly their food, and sooner fattens the animals than leaving them to brave the inclemency of the elements abroad: the extra quantity and quality of the manure paying for the extra labour and attention. That 20 sheep fed in the shed acquired not far from one stone per head more than 20 others of the same weight fed in the same manner in the field, from January 1st to April 1st; the increase of weight being about 10 per cent. on the value of the sheep."

For the Farmers' Cabinet.

Garlick.

Mr. Editor,—I have been a careful reader of your valuable and interesting paper for some time past, and have been much gratified to find therein the productions of so many able writers on many subjects of much importance; but there is one subject on which I do not recollect ever having seen any thing published in the Cabinet. I mean in relation to that noxious plant *garlick*, as to the best mode of conducting a rotation of crops on a garlicky farm, so as to be the most profitable to the agriculturist, and at the same time keeping the growth of it under, in such a manner as to prevent one being annoyed with it in the grain.

I will here mention a system which I have found to be the best calculated to retard its growth: it is to plough it under early in the spring, thereby preventing it from growing during the following summer, which causes much of it to decay; and I am inclined to think that all that had come to maturity dies, by being ploughed under at that season, but inasmuch as the earth is filled with its seeds, there is great difficulty in exterminating it entirely. The best course, then, is, to plough it under late in the fall or early in the spring, and cultivate the land in corn the following summer; then plough it again the following spring, and seed it with oats, or any other summer crop; manure it in the fall, and seed it with wheat, and in the spring following sow clover on it. This mode enables me to realize a crop of corn, a crop of oats, a crop of wheat, and a crop of clover, all without garlick; and by letting the land remain only one year in clover, I generally can have another crop of wheat without much garlick; but afterwards it generally comes thick again. Now, as my principal object in view is, to elicit information on the best mode to exterminate it *entirely*, I conclude by hoping that some of your able correspondents will oblige us with instructions how to cultivate garlicky lands, so as to *exterminate* the noxious plant, or to keep its growth under, and enable us to cultivate our lands profitably.

A Practical Farmer.

To the Editor of the Farmers' Cabinet.

Scarlet Clover.

In the spring of 1839, I was kindly presented with a small quantity of scarlet clover-seed, by John D. Sharpless, M. D., of Philadelphia, which he brought from France, when on a visit to Europe, he having distributed the greater part previously to others. I sowed it sometime in the 4th month, and it bloomed in 50 or 60 days after, being an annual clover; comes to perfection in a short time, producing two crops the same season that it is sown. And as wheat generally grows and fills well on a clover lay, I would suggest for the consideration of those farmers who are in the practice of seeding their corn ground with wheat the same season that the corn is harvested, the propriety of sowing their corn-field with this kind of clover-seed as soon as they finish working it, say about the 1st of 7th month, so that it would have time to come to perfection, fit for ploughing in for a wheat crop.

The seed, I suppose, might be procured in the first place from France, then raised on our own land. The head is of a conical form, 1½ to near 3 inches in length, producing an abundance of seed.

M. S.

East Marlborough,
Chester Co., 1st mo. 25th, 1841.

For the Farmers' Cabinet.

The "Cause" and "Remedy."

Mr. Editor,—I consider the country indebted to such men as Col. Smith and Mr. James Gowen, for their very valuable and interesting essays on the cause and remedy of blight in wheat, and look upon the agricultural periodical press as legitimately engaged while recording the views and opinions of others, presuming not to dictate what ought to be received, and what rejected, in our agricultural creed. I pray you, therefore, continue to give combatants a clear stage; depend upon it nothing but good can come of such agitation: I therefore say with O'Connel, *agitate, agitate!*

In this spirit, therefore, I offer a few comments on Mr. Gowen's article on this subject, as contained in my copy of the Germantown Telegraph; and he must excuse me, if I endeavour to show that he has not, in this instance, stated the question and argued the subject with his accustomed fairness and ingenuousness: but I may be mistaken, and if so, I beg that he will take the trouble to show me in what I have erred. He is quite at liberty to make his view of the case as clear as possible, but I do not consider that this should be done by *darkening counsel*, even although he have to contend with one of Philadelphia's acutest lawyers: this he may consider a grave charge, but I cannot help considering the matter in this light, and I will tell you why. He informs us that the drill system is going out in England, because it has been found that to keep the crop clean from weeds and exposed to the sun's rays, is the way to engender the blight, and he cites Tull's work on Husbandry, *published by Cobbett*, in proof of the assertion. Now, I had not heard that such was the fact, and began to re-examine his extracts, which certainly tend to that point; and yet I knew that I had not seen any thing like this in Tull's own book —in a minute or two, however, I perceived that what he had been quoting was from *Cobbett*, and not from *Tull*, which makes just all the difference in the world! The drill system abandoned, indeed! and Tull made "to work hard to defend his own system from being obnoxious to blight!" It must be a different sort of "evidence" to prevent the resorting to drill husbandry or "*any thing approaching to it*," to escape blight or rust in wheat, much as Mr. Gowen "trusts" will be the case.

But I leave Col. Smith to fight his own battle, and while he is buckling on his armour, I will collect from Tull's own account, what he actually does say on the drill husbandry. The extracts will be taken promiscuously, from the 1st edition of Tull's book, 1733; the object being, to show that he had the fullest confidence in the truth of his practice and the immense advantage of carrying it out—far enough removed from the charge of "working hard to defend his system."

He began to make his drills a foot apart, and to keep them clean by hand-hoeing, (p. 50,) and in this way he brought as good a crop of wheat on barley stubble as that sown broad-cast on summer fallows, while that sown on summer fallow broad-cast entirely failed in the same field; and while one part was fallowed, dunged, and sown broad-cast, and the other drilled and hand-hoed without dung, the drilled was not only the best crop, but the whole piece being fallowed the next year and sown alike, the hoed part produced so much better a crop of wheat than the dunged part, that a stranger might have mistaken the part which had been hoed for the part dunged. "Scarce any land is so unfit and ill-prepared for wheat, as that where the natural grass abounds; weeds may be dealt with (removed) when they rise amongst drilled wheat, but it is impossible to extract grass from the rows: one bunch of natural grass transplanted by the plough into a treble row of drilled wheat, will destroy almost a yard of it. After a crop of wheat has been carried, I have observed the stubble as thick and strong on 4 or 5 inch intervals as on those of 18, but when the rows were so near as to appear like one single row, the stubble was smaller and weaker. If a square yard of sown wheat be marked off, and the plants counted in the spring, it will be found that nine-tenths of the number will be missing at harvest. I have never found *more* than forty ears from a single drilled wheat plant in my fields, but I have numbered 109 grains in one ear of my hoed cone-wheat, and one ear of my drilled Lammas wheat has measured eight inches in length, which is double that of sown wheat; and there is *no year* when one ear of my hoed crop does not more than weigh two of the sown ears, taking a whole sheaf together. Seed cone-wheat, coming all out of the same heap, and planted at the same time and on the same land, the wheat which was sown (broad-cast) produced grains so small, and that which was drilled so very large, that no one would believe them to be the same wheat; every grain of the *drilled* weighed two of the *sown*, and there was twice the chaff in an equal weight of the sown. By drilling, the crop enjoys all the earth, and at harvest there remains nothing but a space of empty mould in the middle of the intervals. I have often weighed the produce of the same ground of all sorts of sown wheat, but never found any of the sown equal to the best of my drilled; a third successive crop of my drilled wheat, without fallow or dung, has

produced 48 bushels per acre. Wheat is blighted at two seasons of the year — first, when in bloom, by long-continued rains that rot or chill the blossoms and prevent them fertilizing, but that which grows in open fields has some advantage from the wind that dislodges the water sooner from the ears; and second, from light ears, which is most frequent. Another cause is the falling of the crop, for then the stalks are broken down near the ground, so that the juices cannot ascend, and then circulation is hindered; that the falling of the wheat causes the ruin of the crop, is well known, but what causes it to fall, is not so plain; but I take this weakness of the stalks, which occasions their falling, to proceed from want of nourishment, want of air, or want of the sun's rays, or of all three. Air is necessary to the life of *all* plants, but wheat requires a free, open situation, where the air has a greater motion, and can more easily carry off the excrements from the leaves after it has shaken off the dews and rains, which would otherwise suffocate the plants: all these evils are removed by the free motion of the air, which prevents the falling and lodging of the crop. A greater quantity of the sun's rays is necessary to keep wheat in health, and in Egypt and other hot countries it is not so apt to fall, as in more northern countries. The sun, with his rays, supplies the part of the *pulse*, as in the human frame, to keep the sap in motion, and carry on its circulation—as in the heart's systole and diastole. Wheat being, doubtless, originally a native of a hot country, it requires, by its constitution, a considerable degree of heat to bring it to perfection; and if much of that degree of heat be wanting, it will be the weaker, *and when the solar rays cannot reach the lower parts of the stalks, the lowest leaves and knots cannot do their office;* by these means that part, which, if it had a due share of the sun's influence, would be hardened, so as to perform the office of the *bones* for the support of the stalk, becomes more like *cartilage*, soft and weak, and unable to sustain the weight of the ear; it yields and lets it fall to the ground, and then the grain is blighted." But he observes, want of nourishment, want of air, and want of the sun's rays, are all removed by the row culture and hoeing, the practice of which must of necessity deprive the earth of every vestige of grass and weeds, and expose the crop to the full influence of the sun's rays. "The whole field of plants receive the same quantity of sunbeams amongst them, whether they stand confusedly, as in broad-cast crops, or in order, as in drilled; but there is a vast difference in the distribution of them amongst those of the *drilled* or *sown* crops, for where the crural parts that should support the whole body of every plant are deprived of the due share of what is so necessary to strengthen them, the plants are unable to stand; but in drilled wheat, the sunbeams are more duly distributed to all parts, and, *being reflected by the ground, whence the lower parts of the stalks must receive the greater share of heat, being nearer to the point of incidence, having no weeds to shadow them.*"

He concludes by the following remarkable words: "I have never seen any drilled wheat so much spoiled by falling, as sown wheat sometimes is: the drilled crop never falls so close the ground but that the air enters into hollows that are under it, and the wind keeps the ears in motion. But notwithstanding all the precaution that can be used, in some unseasonable years wheat *will* be blighted. I have known such a *general blight* when *some* of my Lammas wheat *planted late and on blighting land*, was blighted, amongst the rest of my neighbours by the insects, but the grain of the *sowed* wheat was vastly more injured than that of the drilled; the former being so *light* that the greatest part was blown away by winnowing, and the remainder so *bad* that it was not fit to make bread: the *drilled*, however, made as good bread, and had as much flour in it, as the sown wheat that was not blighted, the grains of the drilled wheat being much larger than those of the sown, being originally formed to be twice as big as the grains of wheat generally are, had they not been blighted."

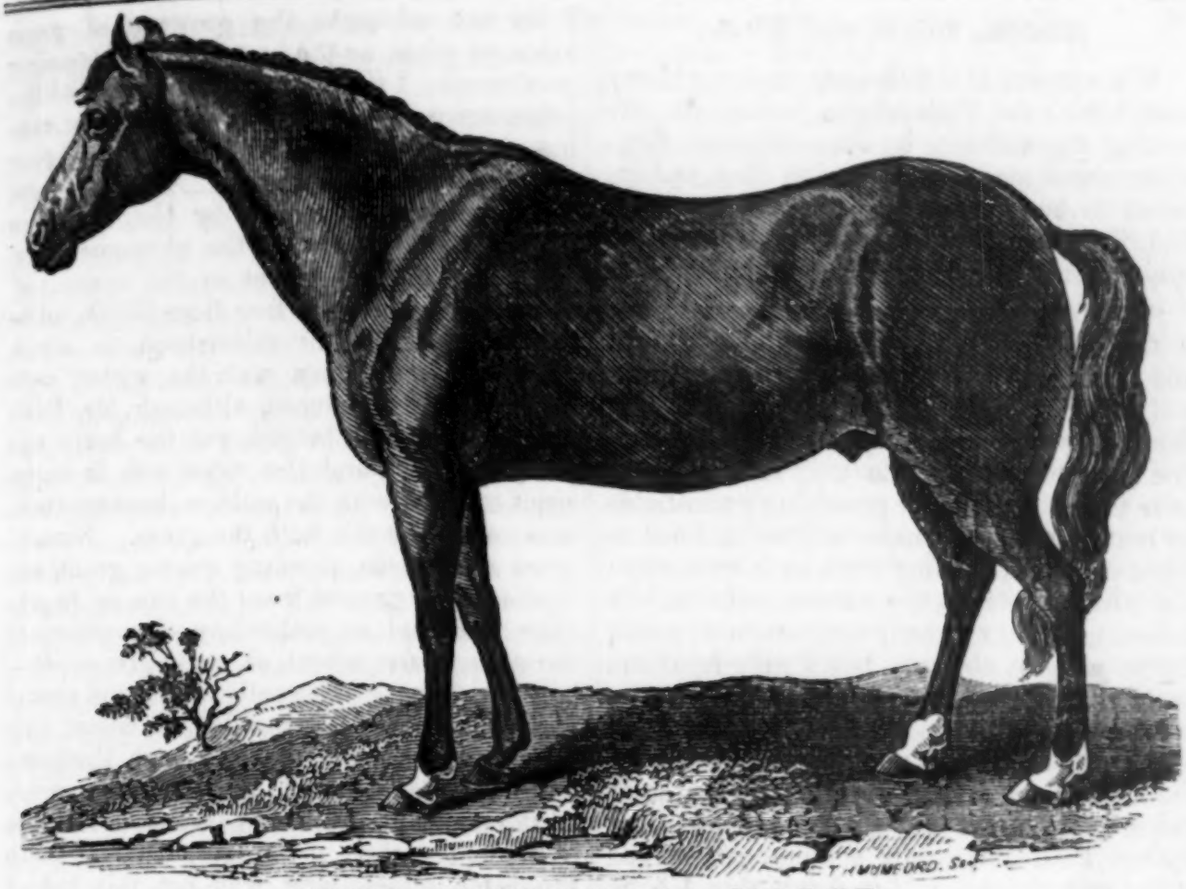
Now, does it not appear strange that any one should go to Tull's book to "show that the wheat in drills is more liable to blight than that sown broad-cast," and that the writer "labours hard" to defend his own system from being obnoxious to blight!

John Symonds.

Montgomery County.

I consider every man who makes some new agricultural improvement — every man who is instrumental in promoting the cause of agriculture — as the most deserving of approbation. The farmer's enjoyment from the improved culture of the ground, is greater than what arises to men employed in other kinds of business; and this might be much increased, if they would expend a portion of labour and expense in beautifying and adorning the lands which the Almighty has blessed with fruitfulness under their hands. — *Dr. Channing.*

The religion of the ancient Persians required its followers to plant useful trees—to convey water to dry lands—and to work out their salvation by pursuing all the labours of agriculture.



THE CONNAMARA HORSE.

From Professor Low's Illustrations.

This beautiful gelding, thirteen and a half hands high, the property of John Bindon Scott, Esq., of Cahircon, is from the county of Galway. His colour a golden dun, with black mane and tail—one of the most valued amongst a breed of horses whose pedigree dates from the true Andalusian Horse of Spain. The horses of Spain have been referred to, as having contributed to form the mixed races of the British Islands; but it is not generally known that a race of horses of Spanish descent, nearly, if not altogether pure, exists in the countries bordering on the English Channel; the tradition is, that from the wrecks of the numerous ships belonging to the Spanish Armada, on the coast of Wales, the western coast of Ireland, and that of Scotland, even to the Orkney Islands—along which they were driven by the storm which annihilated the boasted fleets of Spain in the year 1588—great numbers of horses and mares escaped to the rugged and desolate country, to which they had been brought for a far different purpose—to act as a body of cavalry on their descent: these have continued to breed in many places in wild herds, and their isolated situations have contributed to preserve them an unmixed race to the present day. They are generally from eleven to thirteen and a half hands high, depending much for their size on the nature of the pasture and exposure to which they have been restricted; and although some of them have become ragged in their forms and appearance, many still preserve the character of the Andalusian race, peculiarly light in the head and neck, delicate in their limbs, and of the most elegant colours, of which the chestnut still prevails. They run wild and neglected in these countries of mixed bog and rock, where they may be seen sweeping along in troops amongst the rugged masses of limestone, by which they become hardy and surefooted to a proverb. It is said, when they are to be captured at the age of three or four years, they are driven into bogs and haltered, there being then no difficulty in making a selection; and many individuals are obtained at a very trifling expense, becoming at once so docile, that it is customary to mark them with a burning-iron, to dock their tails, shoe them and ride them, all on the day of *catching*.

It must be regarded as remarkable that these horses should retain the characters of their race for so long a period, in a country so very different from that whence they were derived; but they have merely become smaller than the original race, are somewhat rounder in the croup, and covered in their natural state with shaggy hair—the necessary effect of a climate the most humid in Europe. From mere neglect of selection of the parents in breeding, some are become ugly; still, however, conforming in many points to the original type; while in our own country may be found horses of this peculiar breed, their ancestors having been brought over by the different ships trading hither; and from care in their selection—it being reasonable that a captain, determined to bring over a horse, should select the best for the purpose—and the genial nature of the climate, they attain to that state of perfection, that many pairs of "golden duns" may be found of superlative beauty, and that would command in England the highest prices.

Mildew, Blight and Rust.

We extract the following from an Essay read before the Philadelphia Society for promoting Agriculture, by James Gowen, Esq., at its stated meeting on the 5th May, and ordered to be published. It is in answer to Col. Kenderton Smith's article on the same subject, at p. 293 of the Cabinet for April.

"It will be remembered, that at our last stated meeting, a paper on Mildew, Blight and Rust, was read by Col. Kenderton Smith, and ordered to be published. The subject being of more than ordinary interest to farmers, from the destruction they so frequently have to deplore of their promising grain-fields by reason of blight, many will be inclined to adopt a remedy coming from such authority; but holding, as I do, the adverse opinion, and believing that the remedy recommended would not only prove abortive, but highly injurious to the American husbandman, and to the cause of agriculture, I feel it a duty to attempt a few remarks upon the subject, with the view of claiming from farmers a thorough examination of the whole ground, before they change their practice of sowing grass-seeds with their wheat. But in doing this, I hope it is needless to say that no discourtesy is intended to the author of the *cause* and *remedy*, or to this society: we are all members and farmers, embarked on the same voyage of discovery, and as all have an equal interest in the concern, so should *all* contribute in work or skill, to render the enterprise profitable or beneficial.

"The *cause of blight*, as stated in the paper under consideration, is, simply the grass cultivated with the wheat; it reads—'The matted coat of grass, when thoroughly saturated in moist seasons, by impeding the sun's rays, causes an excess of moisture in the soil, and preserves the earth at the root of the grain too cold and wet to maintain a healthy vegetation of the plant at its then near approach to a state of maturity. This checks and renders languid the circulation of the sap at the very time when nature indicates that not only the *stalk* but the *soil* should be basking in the heat which prevails at that season of the year.' And the *remedy* is, simply 'the abstaining from sowing grass-seeds with the grain.' But it will be proper to inquire, whether Col. Smith has proved by experience and facts that the disease *is* occasioned by an excess of moisture and damp, or shade, by reason of sowing grass-seeds with the winter grain; or, in other words, that the superabundant moisture and shade of grass and weeds prevent the rays of the sun from penetrating to the roots of the plants, and the cold and damp, thereby engendered, producing the rust and blight? And here let me premise, I do not advocate the growing of grass amongst grain as the best mode of obtaining good crops; I simply mean to show, that the grass sown with the grain does not nor cannot occasion blight—mildew or fungi being remote from the question. The strongest proof, perhaps, advanced by Col. Smith in support of his theory, is the phenomenon of Mr. Fox's field of wheat in the summer of 1838, being perfectly free from blight, while the fields in the neighbourhood, in which grass had been sown with the wheat, were all blighted: and more, although Mr. Fox's wheat was much lodged, yet the berry was perfectly filled, and the straw was in no respect touched with the mildew, because there was no grass sown with the grain. Now, if grass and weeds, standing among grain, can so shade the ground from the sun as to produce cold and an unhealthy atmosphere at the roots of the wheat, so as to *disease it*—how much more effectually would the sun be excluded by the layers of lodged wheat, literally touching each other in such thickness as to render the earth, the roots, and much of the stalks of grain, impervious to the rays of the sun?—then, if the same cause produce the same effect, why was not this lodged wheat blighted? This single circumstance proves that the damp, moisture and shade, produced by grass and weeds, cannot be the cause of blight, else the lodged wheat would have been blighted. There is nothing perhaps more uncertain or unsatisfactory, than this comparing one field of wheat with that of others, in regard to the cause of blight; because, there may be so many contingencies in the culture or soil unexplained or unprovided for, that an exact comparison can seldom be made: early sowing, early seed, or early soil, may cause one field to be out of the danger that late sowing, &c. may be exposed to, and vice versa. And to show how insidious the attack of blight is, it is known that of a field of wheat deemed nearly ripe, a sample was cut, which hardened and proved sound seed, but the rest that was left to ripen, when reaped, was injured: had it all been cut when the sample was taken, or had it ripened but a few days earlier, it would not have been blighted. If this mode of proving cause by comparison be safe, why is it that all fields of grain in the same neighbourhood, sown in a given season *alike with grasses*, are not all blighted alike, or all alike sound? All have grass or weeds in them, and why are some injured, while the rest escape disease? Mr. Isaac Newton's information, concerning one land in the middle of an eight-acre field being by accident omitted, when the rest was sown with grass-seed, and which escaped mildew, while the rest of the field was rendered worthless by it, is a very remarkable case, to

which I barely remark, that, in common parlance, 'one swallow does not make a summer."

"From the circumstance, that in the scorching summer of 1838 blight prevailed to an unusual extent — that the lodged wheat in Mr. Fox's field was sound as his standing wheat, and from the few instances of winter-grain being found without grass or weeds to demonstrate the fact supposed to be proven, together with the many fields that escape blight in the worst seasons, although thickly set with grass — I think the hypothesis of grass sown with grain being the cause of blight or rust, is not established.

"I hold, that the prevailing cause of blight in this country, is the *sudden heat and cold* to which the wheat is often exposed in June and beginning of July; and this I will attempt to explain. The wheat plants, at the period of filling, naturally send up, or yield most generously, the juices requisite to furnish the heads with seed or grain; this process will be more or less accelerated by the action of the sun, in proportion as he is mild or intense. If the heat be great, and of two or three days' continuance, the plants will be greatly excited; in this state, should the sun suddenly withdraw, the wheat, exposed perhaps to a merciless N. W. or N. E. wind that sinks the temperature instanter some 20 degrees—the chilling cold of which no *instrument* can fully represent — animal and vegetable life being only capable of realizing it—is it to be wondered that so sudden a check to the pulsations of the excited wheat plants should prove fatal? The cold wind blowing on the head and neck of the plant, chills it at the point of exposure; the head becomes languid or torpid, while from the density of the plants and the heat of the earth, there is genial heat and moisture from below—the fountain that supplied the head keeps bubbling up and flowing on, but the functions of the head, reservoir or condenser, have ceased, and can take no more: in such a case, the fountain or conduits must burst—both or either do—and hence the *rust* that is observable on the plants, *which is but the outward signs of the disease that preys on the vitals within.* After a lapse of a day or days, the sun returns, and blazes on the diseased head, which, having neither health or moisture in it, cannot but wither and die under his scorching influence. This then is, I conceive, the prevailing cause of blight in our climate; and *if so*, how remote is grass or weeds from it; *so* remote, that they could not even aggravate the disease, but on the contrary, their presence might serve to mitigate it: so far from the grass keeping *out* the heat, it helps to keep it *in*, when the sudden cold comes on; and if the grain was up to the chin in grass (if I am allowed the expression) at such a juncture, it might prove beneficial, by keeping the heat and moisture to such a height, that should the temperature to heat be soon and gradually restored, there would be freshness and vigour enough, perhaps, to make a recovery; and doubtless it often does recover, for we often see the evidence of rust on the straw, while the wheat is good and sound. Instead of complaining that the sun cannot reach the roots of the plants after a sudden or temporary cold spell, which might have produced the effect described, it would be better—did he return in a scorching mood—to shut him out altogether for a time, if it were possible, by shading the field with an awning till the wheat had recovered strength to meet him face to face: just as when plants are frosted, keep the sun off them, and there will not be half the danger.

"Blight is not unusual in England and other parts of Europe. In England it is sometimes occasioned by the same cause that often produces it here, viz. — heavy fog, clammy dew, soft rain, &c., which linger on the ears when they are in a milky state, till the sun's hot rays heat the whole mass: this scalding, of course, so injures the plant as to prevent it performing the functions of maturation. To prevent this evil, the most common practice is, the same as resorted to here, the shaking of the grain by means of a rope, so as to have it dry before the sun makes stew-pans of the shells that hold the milk or pulp—and there is philosophy in this, the wet being the element that causes the scald. There are other plants besides wheat, which can endure great heat if *kept dry*, but if exposed to a hot sun while *wet*, would sicken and die; but either wet and heat, or heat and cold suddenly applied, will prove fatal.

"But my object will be attained, if my brother farmers will give this, and the paper of which it is a review, a calm and candid examination. I do not wish to be understood as schooling them into any particular practice; the earth, the sky, the sun and clouds, should be their monitors—nature their great teacher: he who will regard their monitions and teachings, will not fail to make good husbandmen, nor be at a loss to determine whether *grass sown* with grain is the cause of blight. One thing, however, it may be proper to recommend in addition to well-prepared land — reasonably early sowing, early, hardy, clean seed, and early cutting: these are presumed to be all that come within the reach of human means to provide against blight; the rest must be left to HIM *who holds the elements in control.—Germantown Telegraph.*

"Mount Airy, May 4, 1841."

Popular Errors—Farming in the Moon.

The moon has given rise to abundance of superstitious observances, and from the very earliest ages has been supposed to exercise a great influence over the earth and men. Many of these superstitions have been exploded, while others still retain no inconsiderable hold on the public mind, and are pregnant sources of error. On no point is this more perceptible than in farming. That the moon can produce any perceivable influence on crops, or deserves the slightest regard in their sowing or planting, is a notion as false in philosophy, as it is contrary to fact. That the waxing or waning of the moon has any influence on the growth of vegetables or their germination, is a notion belonging to the same age as astrology and witchcraft: and like these beliefs, should ere this have ceased to exist. The celebrated Arago collected from various sources all the well-authenticated facts relating to the influence of the moon on agriculture and the weather, and came to the conclusion, "that there was no reason whatever to confirm the common notion that changes of weather attended changes of the moon, or that this luminary has any perceptible effect, or is in the least worthy of notice in conducting the processes of agriculture." Some of the old superstitions or notions on this subject may, however, be worthy of notice here. Tusser says, in his "500 Points of Husbandry:"—

"Sow peas and beans in the wane of the moon,
Who soweth them sooner, he soweth too soon;
That they with the planet may rise,
And flourish with bearing most plentiful-wise."

But though such was the general feeling, there were some enlightened and intelligent enough to perceive the absurdity of such notions, and expose these errors. Thus Weverfel, in 1748, in an Essay on Superstition, says:—

"The superstitious man will not commit his seed to the earth when the *soil*, but when the *moon* requires it. He will not have his hair cut when the moon is in Leo, lest his locks should stare like a lion's mane; or when it is in Aries, lest they should curl like a ram's horn."

I would say to the farmer, don't trouble yourself about the moon. See that your land is in fine tilth, well manured and drained; your seed fresh and free from foul matter; and when you are ready, sow, without consulting the moon or the almanac. If all is right in other respects, the moon, no matter what may be its position, will not hurt you or your crop; and if your land is but half prepared or tilled, rely on the moon as much as you please, and you have no right to expect a crop.

If you see at the present time, a man's fences buried in briars, his fields overrun with bushes and thistles, and his orchards neither trimmed nor pruned; that man may be set down as a believer in signs, one who governs his farming by the moon, and who will, in all probability, reap such a harvest, and experience such results, as so irrational and unphilosophical a course indicates.—*Gen. Far.*

For the Farmers' Cabinet.

French and American Rural Comforts.

Mr. Editor,—To be able to "define our proper position in the world," and to form a true estimate of our character and standing in the scale of human beings, it will be necessary for us to compare ourselves by the standard of comfort and happiness enjoyed in other civilized countries, and especially with the inhabitants of those states which have been for ages under other forms of government, become venerable from their antiquity. I am led at present to this subject, by a perusal of the article in the Cabinet for March, on the state of society in that part of the continent which is denominated "the Granary of Europe," where cheap land and low wages seem almost synonymous with misery and starvation.

During a late tour in the low countries in France, I was struck *dumb* while witnessing the state of society in that part of "dear, delightful France," having never before had the most distant idea of the possibility that such a low, debased, and degraded state of things could exist in any civilized country under heaven; and I have never, since my return, been able to find words to express my feelings, or to describe what I there saw: but as I have since found the same scenes pourtrayed to the life in Blackwood's Magazine, all I have to do is to bear testimony to the truth of the picture, which is by no means too highly coloured, and which I do most conscientiously; congratulating my fellow-countrymen on the comfort and happiness which they enjoy in this blessed land of liberty and high wages. The traveller thus commences:—

"Nantes, in Bretagne. Passed through a productive country, where the cows seemed the legitimate proprietors—the peasantry, interlopers. The fields were luxuriant, but all that betokened the presence of man was deplorable. 'God made the country and man made the town," is the poet's manner of accounting for narrow streets, but the general order of French towns do not come within the catalogue of *human buildings*—nothing on earth comes nearer to the troglodyte style. Nine-tenths of them seem to have been the

simple work of nature; piles of mire, shaped into habitations by the hand of time and tempest, and as guiltless of glass windows, whitewash, and comfort of any conceivable kind, as a cavern in the back of an American wilderness! But the Frenchman is a genuine 'Gallio' in private life, and careth for none of these things; yet he is within 50 miles of a people whose study is every thing of domestic convenience. To what can the extraordinary difference be attributed, which makes the man of England and the man of France as essentially antipodean as if the diameter of the earth divided them? It cannot be climate, for in three-fourths of France they have shower for shower with England; or if there be a distinction, the winter is keener and the summer more torrid, thus both requiring more diligence in repelling the effects of season. It cannot be poverty, for the French peasant has generally become a proprietor: it cannot be government, for if governments act at all in the matter, it is to set the example of building: yet the French peasant goes on from year to year and from age to age, sitting in a cottage as naked of comfort as if he sat on a hill in Siberia, and a Tartar hut would be well equipped to the best of these hovels: they have not even the merit of being whitewashed sepulchres, for a brush has never touched them since the moment they arose from their original mire;— the truth is, that 'home,' as it has been a thousand times observed, is not *French;* there is but little gathering around the family hearth, and the cottage is not the place of their mirth; they return to it to sleep, and go to it as men to the churchyard, because they cannot help it. Their festivities are for the guingette, their superfluous coin is expended on the gilded head-gear of the rustic belles, or the flame-coloured waistcoats and flowered stockings of the rustic beaux; while the summer lasts they live in the open air, working, dancing, eating, and flirting through the day; and when the winter comes, they cluster together in their huts like bees, with no more concern for their furnishing than a generation of rabbits in their warren; there they hibernate, dismal, dark, and frozen, until the first gleam of sunshine rouse them, and lets the whole tribe loose like the swallows—and then all is fluttering, frisking and hunting flies—or matters full as light as flies —again." J. C.

The right depth and width of the furrow —the right kind and application of the seed —the right times of hoeing, and the right time of harvesting—are all matters depending upon the skill and judgment of the farmer.

Compost Dressing for Mowing Grounds.

In low lands, whether with or without rocks, with or without hard pan; as well upon flat elevations and side hills, as in drained swamps; the crop of hay may be increased to almost *any* extent by a process infinitely more simple, and less expensive, and much quicker, than by ploughing and hand-labour. The method of making compost-manure is the most simple that can be imagined; it is done with facility on the sides of roads, and in the cow and hog-pens, with the refuse of chip yards, leaves from the woods, peat and mud taken from the ditches, ashes, sand, earth taken from the back yards and sinks, scrapings from streets, with mixtures from almost every article that can be enumerated or imagined,—all will serve as manure for mowing lands, producing the most valuable and lasting effects as used for top-dressing only. These compost heaps should be well turned and intimately mixed before they are applied, when the spring or autumn season will be equally suitable for their operation, taking occasion to sprinkle over it a small quantity of herdsgrass seed.—*Monthly Visiter.*

Brown Corn.

This variety of corn was cultivated by B. Cooke, Esq., of Keene, N. H., last season, and the crop amounted to over 50 bushels on half an acre of land. The soil was a sandy loam on a sand bottom; the crop the previous year being corn and potatoes, a part of each on greensward, broken up in the spring. The mode adopted was as follows:—

After the gathering of the crop, rather late in the fall, a coat of the richest manure was spread and ploughed in: thus the land rested until the spring of 1840; another coat of manure was then spread, and the land was well ploughed twice, deep and fine, and harrowed, so that the earth was pulverized and the manure well mixed. The surface being levelled with the harrow, the field was marked off into rows, two feet and a half each way, with a simple machine made for the purpose, drawn by a horse, leaving a furrow three or four inches wide and about two inches deep. The corn was planted on the 13th of May, five or six kernels to the hill; the crop was hoed three times, great care being taken to keep it clear of weeds: at the first hoeing the corn was thinned to four stalks in the hill, at the second to three; the land being left perfectly level and not hilled in the least. The earliest ears were hard in one hundred days from the time of planting, the whole field being gathered some time in September; the crop accurately measured, yielding rather over 50 bushels.—*Monthly Visiter.*

To the Editor of the Farmers' Cabinet.

Maryland and Delaware Peninsula.

Sir,—The articles which have lately appeared in the Cabinet on the advantages of an immigration to the peninsula of Maryland and Delaware, have set many of my neighbours to calculate the chances between a removal thither, or a "dash into the west." Some have thought it would be preferable at all hazards, to strike for the far west at once, as the difference between "the richest land in the universe" and that which is acknowledged to be exhausted—perhaps beyond redemption—is not easily to be appreciated. But all depends upon the mode to be adopted from the very first, in the recovery of exhausted lands, for if it be not begun in the right way, and conducted on the most judicious principles, a man will soon wear out his energies *and die an unnatural death*—he will kill himself by hard labour, without the prospect of a remuneration.

On entering upon these exhausted lands, many persons suppose that by *'cuteness* they shall be able to cheat it out of a crop of grain now and then, without it's knowing it,—with such, the die is cast, and nothing can save them from destruction;—for a considerable time, all that is done, must be done with the single aim to the exclusive benefit of the land, and without a prospect of an immediate return; crops must be sown for the purpose of returning them to the soil, instead of reaping them, and as a man's life consists but of a few years—a few seed-times and harvests—it must not be wondered if some of us hesitate before we determine upon becoming the inhabitants of that "Paradise" which our friends have created by their accounts. Nevertheless, for my own part, I am not by any means convinced, that such a short step is not preferable to a "home in the wilderness," be the land ever so rich and fertile; I have never been afraid of labour, and have an idea that the impoverished lands of Maryland might be reclaimed with far less exertion than would be required on the heavy-timbered lands of the west: but, as I have said, all depends upon the plan to be adopted, and which must, for a long time, be confined to the rearing and keeping of stock, with a judicious plan of tillage adapted to that single purpose, taking especial care that the new adventurer does not attempt to do too much at first, and tire himself at the commencement of a race which will require a husbanding of his strength and resources, taking time to look around him, to well consider the plans which will be offered to his choice, being assured that upon a judicious selection will depend his future weal or woe.

I have met with a very interesting account of the management of a farm of this description in that country, which I really think might be of great service to those who are halting between two opinions, were you to transfer it to your pages; and with this view I copy some extracts, in the hope that you will find space for an early insertion. It is contained in a letter from Mr. W. Young, of Rockland Farm, and addressed to the Vice President of the Philadelphia Society for promoting Agriculture, dated in the year 1810.

"The Rockland Farm exhibited a subject for experiment, as it had been reduced by cropping; and having read in various books the result of sowing plaster and clover, it was presumed that the sowing plaster and clover would be the *extent* of the expenses required to fertilize the fields in a few years—but experiment proved that the plaster and clover-seed were both lost, as no one could point out at any season of the year, what field they had been deposited upon.

The soil was a cold or heavy clay, some blue, white, light brown, and a few spots of red clay, loaded with hard blue stone and rocks, chiefly quartz, mixed with iron and copper. Some of the experiments were made with plaster, others were made by top-dressing with lime, at the rate of 25 to 30 bushels per acre. The lime was brought 25 miles from the kiln, and laid on the land at 25 cts. the bushel. It was formed into a bed six inches in thickness, and covered with earth, ploughed and thrown over it, before it was slaked; a heavy harrow was passed over it as soon as the shells had been reduced to powder; the bed of lime and earth was then frequently turned by the plough and harrow, until the whole assumed the appearance and *smell* of soaper's ashes, containing about ten parts of common soil to one of lime: it was then carted and spread regularly over the field, and in every instance it gave a return of clover, equal to ten loads of stable manure to the acre. The idea of mixing the lime and earth, was suggested from spreading the refuse mortar of lime and sand gathered from about buildings and laid upon the field, the effect of which I observed was more *immediate* than any equal quantity of lime, although the mixture of lime and earth was equally so; the succeeding rains carrying the fertilizing principle of the lime, as from a sieve, into the soil below, completely dividing the soil, rendering that open and warm, which before was too compact and cold for the roots of the grass and grain to live in. Immediately, the whole soil, which before felt dead under the foot, became so elastic, that persons of observation, by walking over the field, even in the night, distinctly told how far the lime and earth compost extended; the colour

of the soil was likewise changed into that of chocolate.

Now these effects seemed to prove, that any thing which would separate the particles of the soil and admit the air, would render these cold and heavy clays warm and fertile, the free intercourse of air carrying off the acid, &c.; and to meet this idea, ploughing in the fall was adopted and found successful: as an experiment, one half a field six years ago was ploughed in the autumn, the other half in the spring; that part which was thus ploughed in the spring, has never yet brought grain or grass equal to the other. Spreading manure in the autumn from the compost bed has also been attended with universal success, both upon grain and grass, the salts of the manure being carried into the soil by the rains upon breaking up of frost, which had in some measure prepared the soil to receive it. Vegetable substances have been covered with earth, rotted, and used with the same success as stable manure; and so long as they operate in separating the soil and promoting the access of the air, they fertilize and change the colour of the mould.

These experiments, tested by frequent repetition, laid the foundation for others less expensive and equally fertilizing, for the production of grain and grass,—they consisted in *ploughing and sowing for the purpose of producing pasture, and the accumulation of vegetable soil:* for this purpose, wheat, rye, corn, buckwheat, and oats, have been sown for green food upon land which was incapable of producing any crop for the harvest, but none of these grains have produced pasture and vegetable soil equal to the oat; for where the others have failed, its roots have pierced, disarmed and vanquished the inhospitable soil, and rendered it fertile; the winter ploughing is continued, and the oats are thrown in as early as February, if the season will admit, upon land which had been ploughed in autumn. They afford early pasture, and when eaten off, and the land has been again sown with the same crop, they furnish excellent pasture from September until late in December, and during a season when other herbage is oftentimes dried up. The first crop gives two months' pasture, but the roots and remaining herbage turned down, affords a manure for the second sowing, yielding four months' valuable pasture. In the second year of the oat pasture, clover might be sown with them, and so soon as a field will produce clover, there is no practical man who does not know how to make his land as rich as he pleases; and having got it into good heart, it will be his interest to put it into such rotation as shall increase permanently its fertility.

It is almost unnecessary to point out the many advantages arising from such a course.

1st. Early and late pasture of the sweetest kind.

2d. Immediate reward for his labour, the stock feeding the crop within two months from the sowing of the seed; the two returns giving six months' green food.

3d. It is one of the most effectual means to root out garlic and other noxious plants.

4th. It is an easy and profitable mode of clearing effectually the grain-fields of every species of injurious weeds, turning them into vegetable mould upon the spot.

5th. It saves the expense of a naked summer fallow, giving in return abundance of the finest food for soiling the dairy.

6th. It enriches the farm from within itself."

J. W.

Note.—In adopting this plan for raising green food for soiling, it will be necessary to sow double the quantity of oats that are required for raising crops of grain, the pasture being required to be thicker; the increase of the vegetable soil from the decayed roots repaying very amply the extra cost of the seed sown.

For the Farmers' Cabinet.

Turnips.

Mr. Editor,—I find that the turnips which are grown in different parts of England, are very dissimilar with regard to their fattening properties; for while those raised in Northumberland and other northern counties are sufficient with straw and hay only, to carry large oxen to maturity, other crops, in the lower parts of Hampshire, &c., are so "washy" as to require an addition of grain of some kind, or oil-cake, before cattle can be made fit for the butcher. So again in Herefordshire, it is customary to fatten the largest oxen of the country—the largest breed in England—with turnips and straw, finishing by merely substituting hay for straw, while in some of the adjoining counties this cannot be done, even with a much smaller breed of cattle, without grain. Now, I should be glad to know whether this difference be attributable to the quality of the turnips, or to the different breeds of cattle; and whether much of the discrepancy which we witness in the accounts of the value of the beet-root for stock-feeding, might not be traced to either the one or the other of these causes?

A.

Substitute for Tea.—The strong aromatic flowers of Rose Pimpernella folia, whose leaves resemble those of Saxafrage and the wood roof or Asperula Adorata, far excel in flavour all the teas of China.

For the Farmers' Cabinet.

Cheap Times.

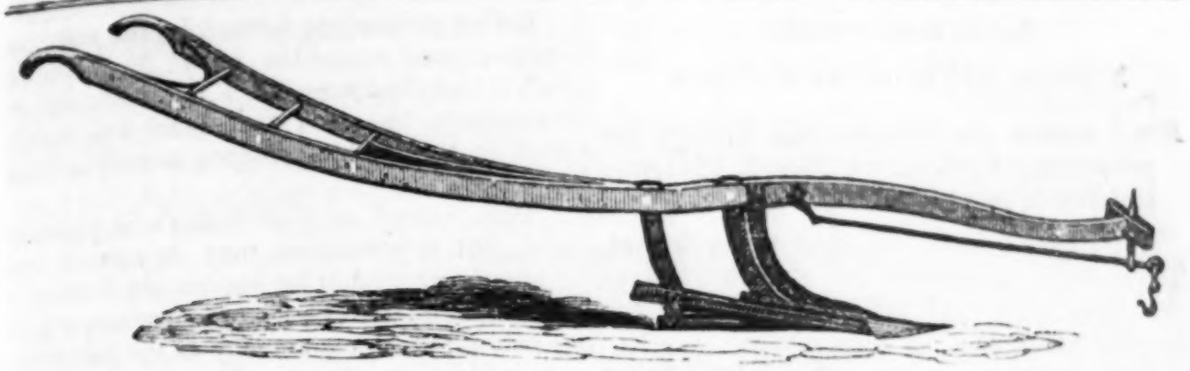
Mr. Editor,—It is customary to consider the present times as awfully severe upon the farmer; "every thing that is raised upon the farm is so low in price;" and truly so it is—but, tell me, is not every thing else cheap also?—except, perhaps, the single article of manual labour, the comparative high price of which has often and again been proved to be an advantage, rather than otherwise. It is true that food for the body is cheap, and so is food for the mind; books of every description, and instruction for our families; clothing of all kinds was never before so cheap and good; while every article in grocery, and all kinds of machinery, with domestic and imported goods, are unprecedentedly low in value and plentiful in the market: so that the farmer should put this and that together, and by striking the balance, he will find that things are not so bad as they appear. Besides, it is a law of nature, that the cheaper an article can be afforded in the market, the greater will be the consumption and the larger will be the demand;—it is only therefore for the producer to find some less expensive mode of raising the articles which he supplies, and the exchange will be in his favour: the same end will be obtained by increasing his crops by an improved mode of management. And there is nothing which offers such facility, as the production, on a large scale, of winter food for cattle, especially the cultivation of root-crops: by these simple means, he may double the quantity and quality of his butter and cheese, his beef, and mutton, and pork, the value of his young stock, and the size of his dung-hill—articles abundantly more than sufficient to make up for the low prices at present to be obtained for the few articles which are generally cultivated upon our farms. I say *few articles*, and really when one considers the numerous articles which are imported into our markets from abroad, most of which might be grown and furnished by ourselves, it would almost appear that the subject must now be noticed for the first time, else the general attention would long ago have been directed to the importance of increasing the number of our productions, and furnishing our own markets with articles—brought at present from the four quarters of the earth—at a price that would amply remunerate the producers at home.

I am led to think on these things, by the perusal of an interesting article at the head of the Cabinet for the last month, recommending the growth of flax and flax-seed; and there are many other crops which could be grown amongst us, which would, at the same time, afford the means of manufacturing therefrom, the articles which are now introduced from foreign countries, at prices which would amply repay the necessary investment of capital. And amongst the first of these may, perhaps, be mentioned the growth and manufacture of the vegetable oils. In France, this branch of industry is carried on to a great extent and without difficulty; hundreds of acres of land are sown with the poppy, from which the finest oil is drawn, most of which goes to Marseilles to be mixed with the *olive oil*, and from thence it is sent to different parts, and sold as the best Florence oil at extravagant prices; even to Paris and to London. This oil is worth about 50 cents a pint for the use of the painter; while for burning in lamps, it is allowed by all to be very superior. The cultivation of the crop is the simplest imaginable, so also is the harvesting of the seed, which always sells for ready money direct from the field, requiring neither housing or cleaning: the cost of seed for sowing is the merest trifle, which is another advantage, as is also the circumstance that the crop does not require manure, but only to be kept clean: the cakes remaining after pressure are found to be one of the most fattening articles that can be fed to cattle and sheep. Here, then, is a single crop, which would make up a considerable portion of the losses which farmers incur by the present low prices of the market.

Then there is the rape crop, which might be made valuable either as green food for cattle, or for oil, or both—the first cutting being generally taken for the former purpose, and the second for the seed; from which, vast quantities of oil are pressed for various purposes, yielding large returns of profit. And to this purpose might the sunflower be applied, to very great advantage, as has often been shown; while the castor-bean plant has been found to flourish in this climate and to yield oil of the finest quality; from all which might be drawn sufficient quantities of oil for our own supplies, as also for exportation, the dry and warm climate of the middle states being peculiarly adapted for the development of oils, aroma and saccharine.

Here, then, is one branch of agriculture which is unwrought, and only requires to be taken up with judgment and a proper degree of spirit, to render it a most lucrative employment, subserving at the same time the manufacturing interest of the country, and giving employment of the most legitimate and healthy kind to thousands of our people. Other resources are still on hand, and may be pointed out in some future number of the Cabinet.

James Eaton.



The Deanston Subsoil Plough.

The plough from whence the above drawing has been made, was brought to this country and deposited in the Franklin Institute by the late James Ronaldson, Esq. It is a gigantic implement, measuring 12 feet 6 inches in length, constructed throughout of wrought iron, weighing upwards of 300 lbs., and capable of rooting up stones of two hundred pounds weight; it is intended for a team of 4 or 6, or even eight horses or oxen, when it might be let down to the depth of the beam. But much of the soil of our country would be effectually worked with an instrument of far less magnitude, constructed chiefly of wood and properly ironed, the *sole* or *share*, probably, being of cast iron; the length of the handles being in proportion to the weight of the plough to be raised by means of their *leverage*.

Subsoil ploughing has formed in Europe—as it is destined to do in this and every other country—a new era in agriculture; it is applicable to all soils, and even in the most sandy will be found of superlative importance, preventing the disease called the *stud* in wheat, which is supposed to arise from a superabundance of moisture which cannot pass away, by reason of some impervious substratum, until it has chilled and deadened the roots of the plants and brought on a mortification of their sap-vessels: the disease is in some parts known as the *stunts* or *stunned*. It is to be understood that the subsoil plough does not *turn* the furrow—it passes along the open furrow made by the common plough, rooting up the bottom to any depth it might be put to, thus leaving it stirred and pulverized, to form a bed of loosened soil, into which the lower or tap roots of the plants might penetrate, when they will easily find moisture in seasons of the greatest drought, and from whence it is *pumped* up by them for the supply of the lateral roots, which are destined to seek *food* in the upper stratum of the earth. The subsoil plough will be found, in many cases, to take the place of underdraining, especially if on ploughing, the land can be laid to give *a gradual fall throughout its whole length*—a matter of the highest importance in the cultivation of every soil. Mr. Phinney, of Lexington, has the following most judicious observations on this subject, which from such a source speak volumes; he says:—

"The subject of subsoil ploughing is one upon which there has been little said and less done in this country. in all our lands there is no doubt that great benefit would be derived from the use of the subsoil plough; in England, the effect in increasing their crops, as stated by some agricultural writers, would seem almost incredible; by these means their crops have been doubled, and in many instances trebled; the expense is, however, stated to be very great, in one case to the amount of thirteen hundred pounds sterling on a farm of 500 acres. But an instrument might be constructed, which would be highly beneficial in the hands of our farmers, and be obtained at much less cost; requiring a less powerful team than the one commonly in use in that country; it might be constructed of wood, and be in proportion to the soil in which it is intended to operate. In a climate like ours, which at that season of the year when our crops most need the benefit of moisture that may be derived from *deep ploughing*, and are most liable to suffer from drought, the use of the subsoil plough would be attended with unquestionable benefit; on a field which had been planted as an orchard, and therefore kept under the plough for some years, in attempting to underdrain a part of it that was usually flooded with water in the spring, I noticed what the English call the "*upper crust*;" this lay some inches below the surface, at the depth to which the land had been usually ploughed, and had been formed by the treading of the oxen and the movement of the plough over it, and which I found so hard as to be, apparently, as impenetrable as marble; this discovered to me at once the cause of the failure of my crop of potatoes the year before, and having thus discovered the "cause" of the evil, I set about devising measures to "remedy" it. I therefore constructed a *subsoil plough*, the beam 5 feet 6 inches long, and 6 inches square, into which were inserted three tines of the best Swedish iron, 12 inches long below the beam; this instrument, drawn by two yoke of oxen and following the common plough, performed the work better than I had anticipated; the "*upper crust*" gave way, the resistance formed by the hard gravelly bottom was soon overcome, the earth being loosened twelve or fourteen inches below the surface; and although not so thoroughly worked as it would have been by a perfect subsoil plough, yet, in my hard and strong subsoil, I am convinced that I found in it an admirable substitute for the English subsoil plough. A part of my carrots was sown on this land, which had been appropriated to the same crop the last year; no more manure was applied than in the previous year, and notwithstanding the very severe drought, which greatly injured most of our root crops, my crop of carrots on this land was nearly double that of last year; and there is no cause to which I can attribute this great increase of produce but the use of my newly-constructed substitute for a subsoil plough. The soil was stirred to the depth of fourteen inches, and by these means the carrots were enabled to strike deep, and thereby, not only to find more nourishment, but to overcome in a great measure, the effects of a very pinching drought."

For the Farmers' Cabinet.

Mildew, Blight or Rust—*Again.*

Read before the Philadelphia Society for promoting Agriculture, June 2, 1841, and ordered to be printed.

This very important subject to the farmer, has recently occasioned two elaborate essays that have been read before the Philadelphia Society for promoting Agriculture.

One proposes a new theory and consequent remedy, or rather preventive, of this fatal disease; the other attempts to controvert the theory, and deprecates the remedy of the first writer, as introducing a pernicious system.

It is not my present purpose to defend or to refute the doctrines of either of these distinguished agriculturists, but rather to point out some errors of reasoning, and misconception of facts, which I think they have both been led to adopt, in their zeal to maintain particular points. I may also give some views and ideas which the perusal of their interesting communications has brought to recollection, or induced me to cull from authors to whose works I have had recourse. I must, in the first place, take the liberty of correcting an inadvertence or inaccuracy in the language of Col. Smith, viz.—that "heat and moisture are two of the *elements* of vegetable life:" he should have said *agents*, which would give a more philosophic cast to some of his arguments. They are most essential agents of vegetation, but entirely distinct from what have heretofore been considered the elements of vegetable life.

Mildew, rust and blight, of cereal grasses, I believe to be one and the same disease, under varying circumstances and modifications, known to physiologists as Puccinia Graminis, or animalculæ of the fungus tribe.

Col. Smith errs in his theory of blight, by limiting it in a great measure, if not entirely, to the single cause of grass and weeds amongst the grain.

The agents which give energy to this parasitical fungus are many; and perhaps, as Mr. Gowen asserts, our atmosphere or climate is the most active.

With this reservation I am willing to go hand in hand with Col. Smith, in assigning as *one* of the predisposing causes, an undue portion of grass and other vegetation existing and drawing nourishment from the ground and the surrounding atmosphere at the same time as the wheat, a substance which requires great nutritive force to carry it vigorously through the ripening process. Admitting the correctness of this principle, and I think it will bear the test of scrutiny, the true practical inquiry for the farmer is—how far can we dispense with or abate the evil?

Before proceeding farther, I must acknowledge myself under the ban of Mr. Gowen's rather tart language, when he deprecates as "visionary the idea that grass and weeds tend in the remotest degree to occasion rust in wheat."

This "idea" of Col. Smith's is probably new, but nevertheless may be correct, and might be arrived at by implication from various eminent writers, who also sustain or give countenance to his remedy as the best mode of cultivating wheat. The old pioneer of Scotch husbandry, Sinclair, recommends the eradication of all weeds, which are likely to generate or produce rust. Le Couteur urges, in emphatic language, the perfect cleansing of the ground, and for this purpose prefers drill cultivation, which he thinks more than compensates for the additional expense, by the increased and more healthy yield. He says, "Clover and rye grass are sown at the cost of several bushels per acre on the wheat crop, and that his practice is to sow grasses immediately after the grain has been harvested, which has been found to answer remarkably well, though at the expense of one additional ploughing," and quotes Sinclair to show that September is generally the best month for sowing grass-seed.

In "British Husbandry," vol. 2, page 159, to prevent diseases of grain, it is recommended to preserve a free circulation of air, and especially drilling the grain instead of sowing it broad-cast. I would not be understood as deciding that Col. Smith's doctrine is correct, and should be adopted, namely, that grass being injurious and promotive of rust, should not be sown *with* but *after* the grain. It is, however, an important question, and ought to be studied and observed with much attention.

I may hereafter trouble the Society with some reflections respecting the present order and succession of crops. Both Col. Smith and Mr. Gowen are, in my estimation, very unscientific in reasoning on the action of grass growing at the roots of grain. One tells us that "the moisture is increased by such vegetation," and the other that "grass and weeds are of service to shade and protect the crops in dry weather." Now my reading, observation, and practice have taught me that grass and weeds amongst crops increase the dryness of the ground, and that to keep the surface perfectly mellow and clean, counteracts the effects of drought; and, in fact, grass itself suffers more in dry weather under the shade of trees, than in the sunshine.

Mr. Gowen's potatoes would assuredly be destroyed by weeds in dry weather, though both might vegetate in a wet season; and his idea of sowing grass to prevent the growth of weeds, is a pretty bold assertion for a

farmer and gardener of such established skill. It merely proves that we busy, money-making men, write as we talk—without always duly weighing our words! I apprehend, too, that he is a little wide of the mark in supposing that grass amongst grain would tend to keep it warmer in sudden changes of temperature —"would keep in the heat," to use his own words. So keen an observer should not have committed this oversight. Our earliest and our latest frosts are observed on grass, and particularly clover, which is one of the best conductors, and consequently promotes sudden transitions from heat to cold.

But I have done with the blemishes and the beauties of Messrs. Smith and Gowen, and shall conclude with a few "notions" of my own. Mildew or rust of wheat and rye, is a parasitic plant, whose mode of existence in its incipient stage we know not, but the causes which call it into activity are probably numerous,—extremes of cold and heat; moisture and rapid evaporation; rank growth, especially when occasioned by unfermented or fresh manure; bad condition of the ground, whether too rich or too poor; the interference of other vegetable matter, especially at the critical period of the grain's maturing; and in strong soil, where the wheat tillers freely, the use of too much seed, which leaves no room for the sun's rays to penetrate the ground, and give proper hardness and substance to the straw.

And now the remedy, or rather prevention, for remedy there is none. Change your system so far as to avoid manuring immediately preceding the crop of wheat. Get the ground in as mellow and perfect order as possible; fresh manure is a rapid generator of weeds and fungi, it should never be put on clean wheat ground. Use good seed (occasionally changed) and so early that it may take root before winter sets in, and will be so far advanced in the spring, when grass-seed is sown, as to prevent a rapid vegetation of the latter, (if you still adhere to this part of the old system;) take great pains to spread your seed evenly over the surface, and not so thick as to overload the soil, a very common error of farmers in this vicinity.

Steeping the seed-wheat in pickle, dusting or rubbing it with air-slaked lime, and the use of saline manure, are recommended by Sinclair, Le Couteur, Buel, and others.

A rigid observance of these precautions will not *always*, but may frequently secure your crops from blight. The sun, the air, and the sky, are beyond our control, but the earth and plants may be greatly modified and subdued by judicious culture. The husbandman will in most cases be rewarded for care thus bestowed; and as a last resort, if his crop be attacked by the mildew, cut it immediately, even in the milky state: it will shrivel less when down than while standing.

ALGN. S. ROBERTS.

Fountain Park, May 30, 1841.

To the Editor of the Farmers' Cabinet.

Large Calves.

MR. EDITOR,—I received your paper with gratification and pleasure, and perused its contents with much interest. I notice a letter from "A Subscriber," wishing to procure an "Ayrshire Cow,"—Mr. Coming imported one about three years since, that has proved a very good milker; she is now seven years old, and has a heifer calf by Mr. Prentice's Durham Bull Leopard, now five months old, and promises to be a very useful animal: the cow is again in calf by "Young Prize," our Hereford Bull, and Mr. C. will sell the cow and calf, delivered to the boat in Albany, at $300, should your correspondent wish to purchase her.

I see, by many of the agricultural papers, notices of large calves,—*I think it is a certain criterion of bad breeding.* I have noticed through life that the offspring of a well-bred animal generally comes small, and makes less improvement the first year than any other; therefore, if I purchased calves for stock, I should never choose an overgrown one; time increases their bad points. Another great error I have noticed,—persons make distinctions between breeds of cattle without putting their hand upon them. It is totally absurd for a man to form a correct idea of the quality of an animal by the eye alone; that is ascertained *by the hand*; the *handling* (as it is termed) is the governing point in purchasing with all *butchers* and *graziers*, and any man with a grain of information on the subject, must be aware that *breeders* should look to that point, beyond all others, in the males which they make use of; it is the only way to keep right. *Hard handlers* require much more food, and must be forced with expensive keep to make them ripe; this I have known by experience from boyhood; and I am satisfied that when the *good quality of flesh*, as above described, is found in a *milch cow*, the milk will invariably yield much more butter in proportion, than that which is drawn from an animal inferior in the touch. If short-horn breeders had paid more attention to these matters, there would not be so many "*tight-hides*," bad forms and bad milkers, which now disgrace their name. An inferior *Durham* is a very unprofitable animal, but the better sort must always maintain a high rank, and will, with the *Herefords*, be the staple breeds of the country.

I am, dear sir, yours, most respectfully,

WM. HENRY SOTHAM.

Albany, May 24, 1841.

For the Farmers' Cabinet.

Root Culture.

Mr. Editor,—Light and darkness are not more opposite, than the testimony for and against the value of the beet as winter provender for stock; but the question, as to the expediency of making some provision of this nature for that trying season, ought long ago to have been settled in the affirmative, for it is "admitted by agriculturists in England that the introduction of the root culture there, has effected as great a change in the prosperity of the landed interest, as the application of steam has produced in the results of mechanical ingenuity;" and this is not a mere "assertion," as intimated by your correspondent Z. Y. at p. 292 of the Cabinet—*it is a fact*, fully sustained by most ample proof.

The past winter has been most trying; many cattle and sheep have perished for want of food, and the sufferings of their owners must have been second only to those of their poor animals. Young cattle have been purchased at the price it has cost to winter them, while cows have brought no more than $15 a head! If this state of things does not operate as a *caution*, and induce us to cultivate some kind of root-crop for the coming winter, we, and not our cattle, ought to bear the consequences. In late numbers of the Albany Cultivator, attacks have been made against the sugar-beet, by men whose judgment and veracity are above all suspicion: they assert, that from fair experiment, they have found it an almost worthless crop for the feeding of stock, particularly hogs; while Mr. A. B. Allen of Buffalo—whose judgment, experience and veracity, no one who knows him will call in question—declares, in answer to these attacks, that he considers the beet as one of the most valuable of roots for this purpose. He says:

"Now, I have not only my own taste for three years, to prove that the sugar beet raised in and about Buffalo is exceedingly sweet and nutritious, but can bring an hundred witnesses, any time, to corroborate the assertion, from their own daily experience. The blood-beet cannot compare with the sweet Silesian, and they are never boiled in a pot by themselves, that there is not a sweet syrup left at the bottom, almost of the thickness and agreeable taste of sugar molasses; which, in my opinion, requires only to be clarified and granulated to make good sugar. And as food for stock, I know that, even when fed raw to cows, they considerably add to the quantity, and especially to the quality of the milk, making the butter as sweet, and almost as yellow as that produced from fresh summer grass, keeping them, with the addition of hay alone, in the best possible order; and the young stock on the same food were as fat, as fine and glossy in the coat, as when on summer pasture. But their most important use is as *food for hogs:* the first winter I fed them with potatoes to my grown swine, when raw; the second winter, on beets alone, thrown on the ground, and I did not notice any difference whatever during these two seasons; each time they were kept in as good flesh as I ever wish to have breeders. The third winter—the last—I commenced cooking them, and have steamed beets alone, and fed them to the pig of two months and the grown animal of four years; but to the last-mentioned I gave a stinted allowance, or they would get too fat for breeding, while to the former, with the addition of a trifling quantity of corn, I never saw animals thrive better, or remain more contentedly;—they would fill themselves and lie in their straw, as contented as puppies and whist as mice: I have sometimes steamed a mixture of carrots, potatoes and beets, and found as a general rule, that the pigs would first pick out the beets, next the potatoes, and only eat the carrots last—and this is *experience*, and not mere *theory*. I like not this jumping at conclusions from partial experiments. It has been maintained, that ruta baga, by analysis, was but little else than wood, and *therefore*, as food for man and beast, almost totally worthless! And yet this despised root, with a little straw, makes most of the English beef and mutton! I once told a neighbour that I cultivated pumpkins a good deal, and found them good food for swine: he replied, 'They never did any thing for mine but scour them.' I would ask, what would be the probable analysis of clover? Not much, I fancy, but water; and yet my hogs will keep fat upon it in summer and grow well. I conclude, therefore, by saying, if these gentlemen's stock does not thrive on sugar beet, they must have been deceived in their seed, or they have not the right sort of stock to feed upon them."

Much, however, no doubt depends on soil and circumstances; and in all probability it will be found that the crop will be more nutritious and keep better, if the sowing be delayed until June, the cleanest and most convenient seed-bed being a rye stubble, well dunged, and planted the moment the crop is removed.

J. G.

For the Farmers' Cabinet.

Improved Breed of Hogs.

Mr. Editor,—"You may buy gold too dear," is an old maxim that has been verified in many ways, and the refinement in which so many indulge themselves at the present time in hog's flesh, may be pointed to as an-

other mode of indulging a propensity for *essences.*

Your correspondent Homer Eachus's account of the weight of the Delaware County hogs, at page 329 of your last number of the Cabinet, proves that in our own breeds we have as much in *quantity* as we need, and in the opinion of many who saw these splendid animals there was no lack of *quality;* indeed it would seem to be a question what more is requisite! Now, it is readily admitted that many of our breeds need improvement, but it is contended that a cross with the best of our own varieties would give us all that is necessary for every good purpose, without the extravagant cost and rage for speculation which is so freely indulged, even by the soberly discreet amongst our hog-breeding friends.

In looking over that very interesting work, "A General Treatise on Cattle," by John Lawrence, I find some excellent observations on this subject, which, although they were written many years ago, are as applicable at this time and in this country, as they were at that time and in England, and go to show the truth of the adage, "there is reason in all things"—even in the breeding of hogs: the author says, "when I formerly asserted that the southern cross had not improved our breed of hogs, it is probable that prejudice had some share in the assertion; but my reader is aware that I do not love *all fat*, even in bacon; and surely good shape and growth have been too much sacrificed to that *mould* which produces only fat. Amongst our native breeds there were, doubtless, a small breed improveable in itself, an excellent cross to reduce the size and amend the coarseness of our largest stock, by which, independent of any external assistance, we might have obtained our pork equally delicate, and have derived as great a weight of it from a bushel of corn and a given quantity of milk; I will, however, freely acknowledge the beauty and excellence of various small breeds which have originated in the China cross, and subscribe fully to the merits of the present Berkshire stock: but *est modus in rebus*, and whilst a *cross or two* of the round, waddling, shapeless, small-boned stock in question may give the fattening principle to our leggy and flat-sided breeds, reducing and improving their huge heads and ears, a farther repetition goes to destroy symmetry and power of growth in the animal, and tends solely to the production of blubber: and another consequence is, a reduction of the procreative power, apportionate to the acquisition of that tendency to over-fattening, the new variety of sows having few pigs at a birth, and being generally bad nurses; at the same time that the pure foreign breed, and perhaps the produce of the *first* cross, may be prolific. And I submit it to improvers, whether regularity of form and just proportions are, or are not of consequence in swine? If they are, whether a thorough-shaped hog of one of our best reputed breeds—ages equal—would not produce a greater weight of pork in return for a given quantity of food than one of our fashionable breed? The former would, in all probability, be worth more per pound than the latter, allowing the predilection of a *minority* for all fat: at the same time there is a class of our citizens whose *relish* it might not suit—I mean the cooks—whose perquisites might suffer to an extent which few would imagine, of which I give an example. A lady, succeeding to a boarding school, told her cook it was her determination not to allow the perquisite of kitchen stuff, but a sum in lieu thereof, inquiring what would be the annual amount? The cook reluctantly replied, about five or six pounds, she believed; well then, said her mistress, I will allow you seven guineas—the kitchen stuff was sold for thirty-five guineas the first year!

As to the *form* of a pig, the improving reader will advert to those general ideas of proportion and symmetry already so repeatedly and everywhere insisted on, and they are of equal validity and consequence, be the animal hog, sheep or ox: depth of carcass, lateral extension, breadth of loin and breast, proportional length, *moderate* shortness of leg, and substance of the gammons and forearm being *essentials;* these being qualities to produce a favourable balance in account of keep, and a mass of weight which will pull down the scale; and in proportion to the capaciousness of the loin and breast will be the general vigour of constitution. To be sure, even a good hog may have a heavy, coarse head and long ear—*but he carries them himself*—although it is conceded that a handsome sprightly head, with light, pointed ears, are pleasing to the view, and may have a favourable effect in the market. If *colour* deserve any consideration, I should prefer the light and sandy spotted; such skins appear the most delicate when dead, and in respect to the skin or rind of pork, I have elsewhere stated my preference of the thick to the thin skin, assigning reasons for it; our best-bred pigs are often thick-skinned, but such skin is tender, gelatinous, shining, easy to masticate even in the shape of *crackling*, and very nutritious, whereas, to eat the crackling of thin-skinned pork, case-hardened by the action of fire, requires teeth equal to the division of block tin." M.

WITH the gratification of the present profit, comes the pleasure of anticipating the *better* crop in succeeding years.

To the Editor of the Farmers' Cabinet.

Cone-Wheat, or Turgidum.

Sir,—In an interesting article on this subject in your last, an expectation is hazarded on the security of the crop from the attacks of the Hessian-fly by its introduction. On perusing Tull's work on horse-hoeing husbandry, I find some very valuable remarks in his chapter on blight, which deserve, I think, a republication in your pages, as they go far to sustain the opinion therein expressed. In speaking of the liability of injury of the crop from the ravages of insects, he says, "In dry summers this misfortune seldom happens; much heat and little moisture being most agreeable to the constitution of wheat, for then its rind is more firm and hard; and it is, on the contrary, made more soft and spongy by too much moisture. The most easy and sure remedy that I have yet found against the injury of these insects is, to plant a sort of wheat that is least liable to be hurt by them, viz: the *White Cone-Wheat*, which has its stalk or straw like a rush, not hollow, but full of pith (except near the lower part, and there it is very thick and strong). It is probable its sap-vessels lie deeper, so that the young insects cannot *totally* destroy them, as they do in other wheat, for when the straw *has* black spots—which show that the insects have been there bred—yet the grain is plump, when other wheats mixed with it are blighted. This difference might have been from the different times of ripening, this being ripe about a week earlier than some other kinds; but its being planted together, both early and late, and at all times of the wheat-seed time, and the *White-Cone always* escaping with its grain unhurt, is an argument that it is naturally fortified against the injury of those insects, which in wet summers are so pernicious to other sorts of wheat; and I can impute it to no other cause than the different deepness of the vessels, the straw of other wheat being very much thinner and hollow from top to bottom; this also having a small hollow at bottom, but then the thickness between the outer skin and the cavity is more than double to that in other sorts of wheat, so that I imagine the insects reach only the outermost vessels, and enough of the inner vessels are left untouched to supply the grain. Cone-wheat makes very good bread, if the miller does not grind too fine, or the baker make his dough too hard, it requiring to be made softer than that of other flour: a bushel of cone-wheat will make more bread than a bushel of other kinds, and of the same goodness, but it gives a yellow cast to the bread."

I am happy to learn that a friend to the improvement of the agriculture of the country has taken measures to introduce this peculiar variety of wheat amongst us, and if it be proof against the *peculiar* scourge of our crops, the *Hessian-fly*, he will indeed deserve the thanks of the community: this is the proper season to order from abroad, seeds for autumnal planting. J. Delcroix.

Delaware State.

To the Editor of the Farmers' Cabinet.

"Dairy Maid" and "Blossom."

Sir,—Permit me to notice a communication signed "Correspondent," at page 332 of your last number, in which a very erroneous inference is made, to wit—that Mr. Canby "declines upon principle to accept Mr. Gowen's terms."

It is somewhat strange that "Correspondent," who seems to have regarded the expected trial of the cows with some degree of interest, should be ignorant that Mr. Canby did *not* decline the trial because it assumed "*the questionable shape of a bet*"—the reverse being the case, and which I should not now take the trouble to explain, but that your readers may be led to infer, that as Mr. Canby had declined the trial on principle, I must have proposed something that in conscience was objectionable.

Now, you may recollect, that last August you copied from the Delaware Journal, Mr. Canby's statement of the yield of his cow Blossom, in which he gratuitously places it against the yield of "Dairy Maid," beating her, in his own way, in a very unceremonious, if not in a very questionable manner; adding something by way of felicitation at his success, and of his determination, should the result he valued himself upon be overcome, "to try his hand again for the credit of little Delaware."

"Dairy Maid" and her owner being pointed at thus, it became me, as I thought, for the credit of Pennsylvania, not to let "little Delaware," much as I respected her, *outmilk* us,—however flush, in contrast with the "Keystone," the little state may be in *pocket*, I was anxious to show that we were not as yet *outdrained* at the *teat*, but lactescent. This I did, through the Pennsylvania Inquirer of the 18th of August, alleging that "Blossom," milking 35 quarts per day in the *first* month from calving, was no triumph over "Dairy Maid," who gave on an average 33½ quarts per day in the *fourth* month from calving; and proposed a trial of the cows at a proper period, to test their capabilities—say three months after calving;—then, if Blossom gave more milk in a week than Dairy Maid, I was to pay to the Delaware Agricultural

Society five hundred dollars; but if Dairy Maid beat Blossom, Mr. Canby was to pay to the Philadelphia Society for promoting Agriculture a like sum. This was not betting—no such thing; it was to be an interesting trial for the benefit of agriculture. On the 2d of October, Mr. Canby responded through the "Inquirer," and says: "I will accept his bet, but not on the terms he proposes, for though as friendly to agricultural societies as he can be, I think to risk that amount for their gain, would be paying too dear for the whistle;" and adds, "I will therefore accept Mr. Gowen's challenge, the winner to keep the money, (or hand it over to the Society, if he prefers so to do.")

Now, I put it to "Correspondent," whether it was fair, with these facts before him, to put the declining of the trial on grounds that reflected to my disadvantage?

Respectfully, your obedient servant,

JAMES GOWEN.

Mount Airy, June 4, 1841.

To the Editor of the Farmers' Cabinet.

Soiling Horses.

SIR,—At the suggestion of an intelligent neighbour, I have commenced a novel mode of soiling my farm-horses, and am desirous of describing it for the adoption of your readers generally.

Mine is a dairy-farm, and as I devote all my pasture-ground to this purpose, it is not my practice to turn out my horses until after the hay harvest, that the cows may have the benefit of a fresh change of pasture weekly. At the bottom of my cattle-yard is a small meadow, about two acres, which has been enriched for many years by the overflowing of the yard; this I have commenced cutting by *piecemeal* for the soiling of my horses in the stable, and it is really surprising to find how very small a portion of land is mown every morning for the supply of four horses during the day and night: the labour of mowing and carrying to the stables is as nothing, the work of about half an hour only. As the land is cleared, it is immediately spread with a covering from my compost heap, which is so near that a boy can carry on a sufficient quantity for the purpose in a very short space of time: the effect is beyond my conception, for, judging from present appearances, I shall be able to cut the grass from this piece of land four times the present summer; and it is my intention to keep my horses in the stable the whole time, by which I shall save many acres of pasture and tons of hay, as also many loads of the best manure. Now, can any other crop pay me equal to this small portion of my farm? R.

May 21.

English Agriculture.

WHATEVER opinion we may form of Britain — her pride, arrogance, insolence, presumption, vanity — faults, too, that will have to be amended within ten years by the compulsory process of a general alliance of nations against her; yet we must all confess that her agriculture is the most stupendous thing under heaven! When it is remembered that the crop of turnips grown in Norfolk alone is greater than the value of her trade with China; that the market-price of the geese brought from the Lincolnshire fens, is more than her trade with Denmark; that you shall see as a *common thing* a hundred acres of turnips, or a hundred acres of beans, or thirty acres of cabbages in a single field—a farm of 300 acres, all mown—or a farm of the same size, 300 acres, all in crops — the live stock on a single farm worth $50,000—twenty or more horses employed on one farm every working day in the year, and by means of thrice ploughing (heavy clays) turning 900 acres in a single year; — I say, when this is remembered, it will be seen that "great" as Britain is in every thing, the superlative degree of greatness is in her agriculture — in her soil, *naturally poor*, but made rich by the application of *capital* and unwearied assiduity, good sense and enterprise. While in this country, we fail most from the want of *capital*, and from the circumstance, that agriculture does not rank as an employment with others — especially with *trade* — it is not valued as it ought to be. The English contend, that it never was so valued in a democratic country; agriculture being, in their estimation, substantially an aristocratic employment: and it must be confessed that this is true of England, and perhaps of Europe generally. In England, to be wanting in the dignity conferred by *landed* possessions, is, to want that which conducts to the highest offices and the most exclusive society. The term *country gentleman*, is in England almost an actual patent of precedence; and so far do they carry this, that no man in trade can marry into a family of landed descent and possessions, unless he add to wealth an eminent character for talent. — *Far. Mon. Visiter.*

ONE pair of pigs will increase in six years to 119,169, taking the increase at fourteen times per annum. A pair of sheep, in the same time, would increase but sixty-four times.

Dr. Lettsom ascribes health and wealth to water, happiness to small beer, and all diseases and crimes to the use of alcohol.

Record *of C. J. Wolbert's sale of pure and mixed breeds Short-Horn Stock, on the Glenfield Farm, 11th May,* 1841.

Mixed Breeds.

Alice, 3 years, J. R. Neff	$52 50
Sally, 4 months, J. B. Winder	15 00
Molly, 3 years, Purves	35 00
Cherry, 5 months, Purves	16 00
Lass, 8 years, Levick	55 00
Rush, 10 months, Neff	15 00
Kate Kearney, 5 years, J. K. Smith	47 50
Ben, 1 month, C. Slack	10 00
Adelaide, 9 years, Levick	87 50
Bob, 5 months, S. Richards	16 00
Rosetta, 4 years, Rodgers	120 00
Flora, 11 years, has made 20 lbs. of butter per week, Levick	67 50

Full Bred.

Miss Kirby, 4 years, S. Richards	$240 00
Sarah Kirby, 6 months, Richards	140 00
Ellen Kirby, 17 months, O. Jones	150 00
Nelly, coming 5 years, D. Kelly	105 00
Pioneer, 2 months, Hilton	42 50
Cinderella, 3 years, D Kelly	185 00
Fanny, 7 years, J. P. Wetherill	165 00
Marmion, 4 months, Aspinwall	50 00
Rose, 3 years, Mosher	130 00
Clipper, 2 months, J. Sheppard	20 00
Jane Grey, 3 years, Levick	37 50
Lucy, 16 months, Aspinwall	105 00
Beauty, 5 years, Clark	115 00
Rosanna, coming 3 years, Tyson	150 00
Janette, coming 3 years, Wright	105 00
Dahlia, 5 years, J. R. Neff	105 00
Victoria, 7 years, Gowen	140 00
May Rose, 5 years, J. P. Wetherill	205 00
Sultan, 2 weeks, Parnell	35 00
Kate, 6 years, Tallman	305 00
Defiance, 6 months, Wood	175 00
Matilda, 18 months, W. See	175 00
Isabella, 12 years, Cowperthwait	235 00
Cleopatra, 2 years, J. Gowen	300 00
Red Rose, 6 years, Simmons	165 00
Oscar, 11 months, Neff	65 00
Independence, 10 months, Logan	55 00
Roderic Dhu, 13 months, Tallman	200 00
Colostra the 2d, 1 year, Hatch	255 00
Exter, 2 years, Levick	300 00
Colostra, 5 years, Turner	550 00

Sturgeon Pie.

Would some of our friends on the river shore, plough up a bank of earth, and place upon it half-a-dozen sturgeon, covering them with three feet of vegetable mould, swamp mud, &c., and note the result. After decomposition, the mass should be turned over and mixed with lime and plaster; the latter to prevent the escape of ammoniacal gas. Many loads of the most valuable manure might thus be obtained at comparatively small expense. It is quite inconceivable in how many ways an industrious, intelligent man has it in his power to add to his means of *creating manure*, without going to the city—a distance of ten or twelve miles, perhaps—to purchase spent ashes and stable dung, at enormous prices! There are few who could not supply a much better article than the first, by setting fire to the rubbish around their dwellings, after collecting it into a heap for that purpose; while the urine, which escapes from their cattle-yard during the whole year, would, if preserved, amount to many times more than the value of all the city-muck, which is obtained at so much cost of labour, time and money. By these means, a man might soon make a large farm of a small one—for "it is the *crops*, and not the *land*, that give a profit."

We are indebted to the publisher of "Leibig's Chemistry," for a copy of that most valuable and interesting work, which ought to be found in the library of every educated agriculturist in the Union. It creates a new field for observation, reflection and experiment. We consider it, in the language of Mr. Nutall, "the best book ever published on vegetable chemistry, as applied to Agriculture, and calculated to produce a new era in science." It may be obtained at the store of the proprietors of the Cabinet, No. 50, North Fourth st., together with other standard works on Agriculture, Horticulture, and the arts and sciences generally.

On a visit which we yesterday paid to the very extensive and most admirably cultivated gardens of Mr. Buist, in 12th street, Philadelphia, we witnessed with astonishment the growth of the *Bokhara Clover*—a specimen of which was exhibited at a late meeting of the Philadelphia Agricultural Society—and found it, by measurement, five feet four inches in height, full of foliage, and standing thick and upright in the rows. The produce must be enormous, as Mr. B. informed us it might be cut seven times during the summer. It is improperly denominated *Clover*. Its appearance is precisely that of Lucerne, and we would suggest the propriety of giving it the name of *Gigantic Lucerne*.

The quantity of rain which fell during May (5th month,) was ..... 3.259 inches.

John Conrad.

Pennsylvania Hospital, 6th mo. 1, 1841.

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